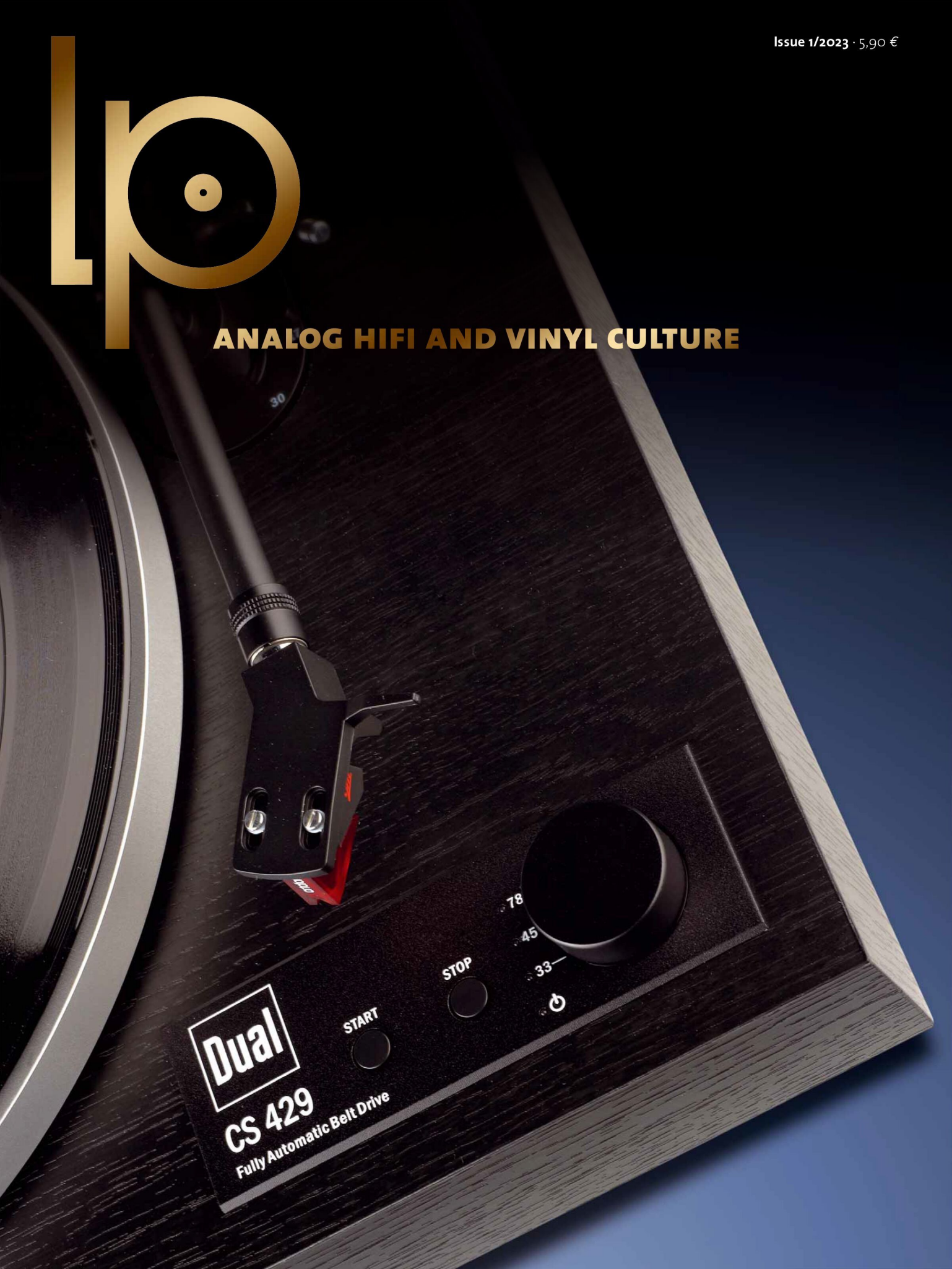
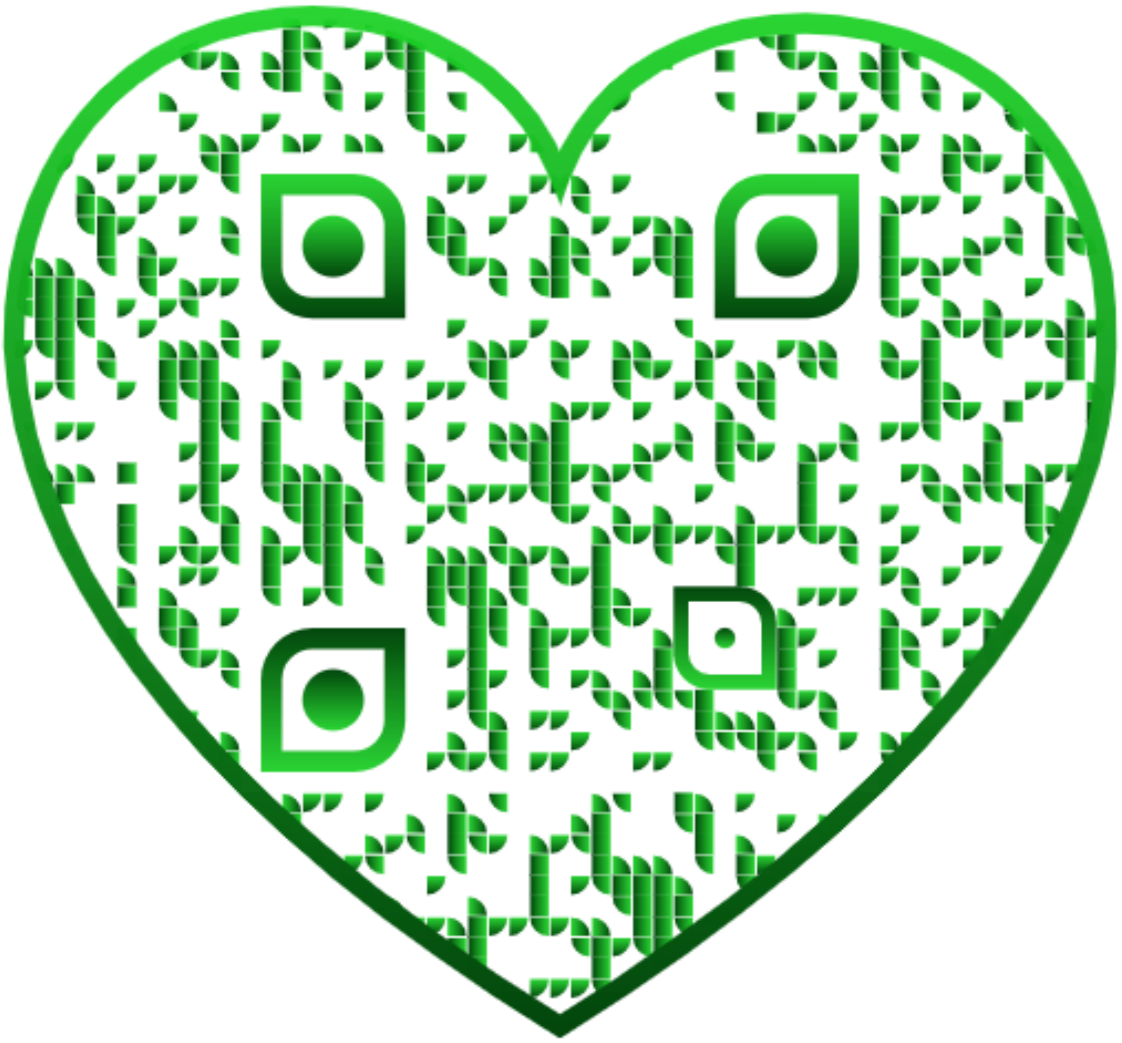
Issue 1/2023 · 5,90 €

lp

ANALOG HIFI AND VINYL CULTURE





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The state of affairs

Undoubtedly, the vinyl record is doing well. Sales continue to rise across the board and there's no reason to expect that to change any time soon. Maybe this is a good time to ask where the record actually stands: Has anything significant happened technically or tonally in the last few years? Has there been any real progress, be it in the production process or on the playback side?

Regarding the production of the „black gold" it can be said: Fortunately, the dependence on production machines from the seventies of the last millennium is decreasing. There are now at least a handful of manufacturers who have to counter the constantly increasing demand for production capacities with newly developed record pressing machines. The process itself is still the same, but the degree of automation is increasing, which benefits the quality of the end product. The physical limitations of the medium are still in place and the same as they have been for many years. After the actually very exciting project „HD Vinyl" seems to have failed, no major progress is foreseeable in the short term. Also on the playback side, people are still cooking with water. Turntables still work exactly as they did 100 years ago, only the direct drive is enjoying increasing popularity again. Which brings us back to the state of the art in 1980, shortly before the CD began its triumphal march. On the pick-up side, only the Japanese manufacturer DS Audio has recently distinguished itself with its modern electro-optical pick-up - there is real progress to be seen here. Let's hope that at some point these will also appear in price ranges that are interesting for a broader group of buyers.

Otherwise everything is the same when it comes to records. But maybe that's exactly what makes the medium so appealing.

Holger Barske, Editor in Chief

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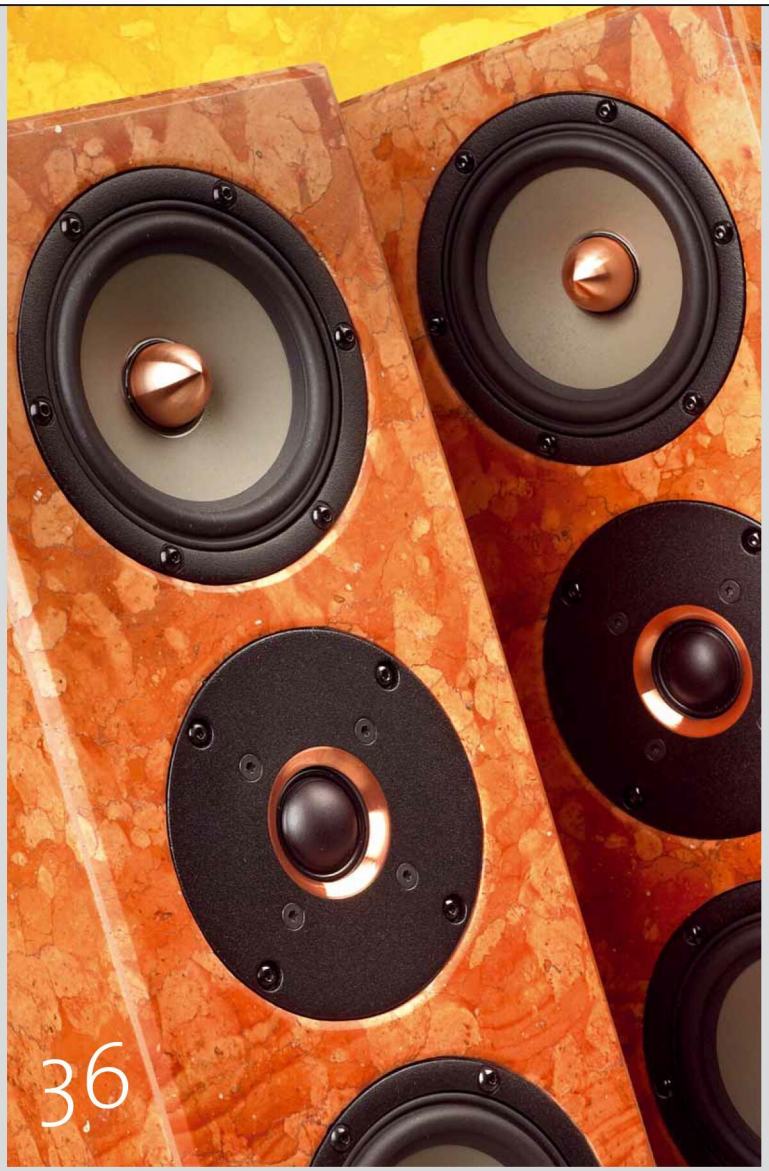
Dual
CS 429
START
STOP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INPUT
BAL
BAL CD
LINE 1
LINE 2
LINE 3
POWER
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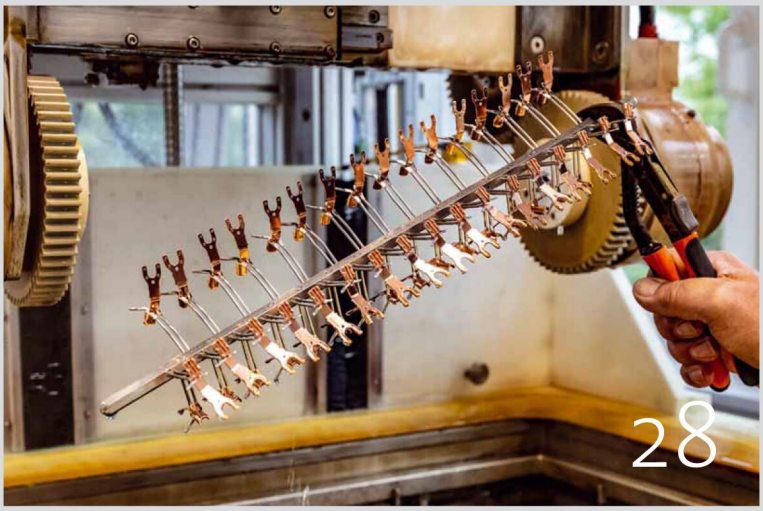

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Pro-Ject VC-E2 and VC-S3 record washing machines

Even more robust and even easier to use. Made in Europe!
In 2016, Pro-Ject Audio Systems launched its first record washing machine. The VC-S
hit the market and made super-fast vinyl deep cleaning affordable. Three years
later the VC-E and the VC-S2 ALU brought extensive improvements. And now
Pro-Ject is concentrating all of its experience from the past seven years into the new models Pro-Ject VC-E2 and Pro-Ject VC-S3.
The further development of the previous record cleaning machines is extensive. A new
magnetic clamp protects the record label from the cleaning fluid to prevent damage and makes the whole cleaning process easier and faster – no more tedious unscrewing. Put your record on the device, put on the clamp and you're good to go.
The robust, easy-to-use metal arm is mechanically stable and steers the entire suction power directly to the record surface. Thanks to the new, easy-to-change and self-adhesive suction lips, both models clean your records gently and profound. The container for collecting the used cleaning liquid takes 0.5 liters in the Pro-Ject VC-E2, while the Pro-Ject VC-S3 takes up a full 2.5 liters - a real advantage, because when you use the new „Wash it 2" cleaning solution, it evaporates
liquid via the optimized vapor outlet from the container so that you rarely have to empty at all. And if it has to be, you can do it effortlessly.
Pro-Ject presents the new record cleaning devices made of high-quality materials completely in Europe. Both devices are characterized by an excellent processing quality and practical functions, and combine them effectively with an attractive industrial design with an easy-to-use solution for an absolute clean sound from your records.
The Pro-Ject VC-S3 is characterized by the extensively improved vacuum motor aluminium mounting pads and cataphoretic surface treatment. And, due to the larger tank, mainly appeals to heavy users and owners larger record collections.

The VC-E2 retails for 450 Euros, the VC-S3 for about 700 Euros.

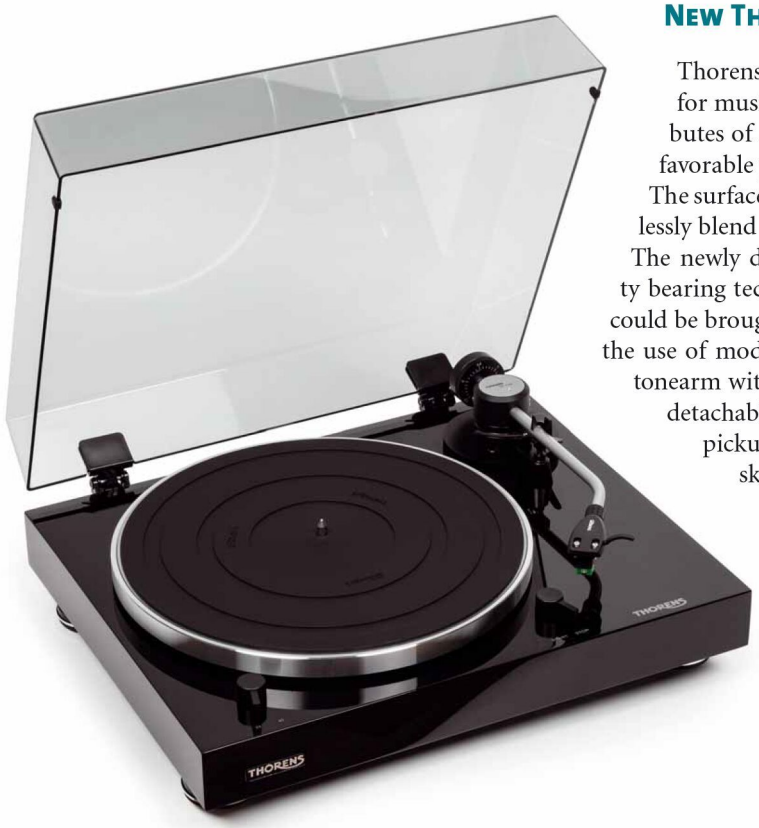
Contact: Pro-Ject Audio Systems, Vienna, Austria
Internet: project-audio.com

MoFi SourcePoint 10 coaxial loudspeaker

MoFi introduces its first loudspeaker from the hand of developer legend Andrew Jones. Made with a self-developed coaxial driver, the SourcePoint 10 resulted from 18 months of research and development led by Andrew Jones. The speaker is driven by a new type of twin-drive neodymium magnet system, which according to MoFi promises impressive dynamics and freedom from distortion. As a high-quality compact loudspeaker, the SourcePoint 10 claims to play far above its usual price range. „Independently of what the SourcePoint 10 was later to cost, I had the motivation to offer a sound experience that far exceeded the envisaged during the development phase price class," explains chief developer Andrew Jones.The heart of the SourcePoint 10 is undoubtedly the coaxial driver, done with a lot of proprietary technology. Although Andrew Jones is a worldwide legend, well known for his developments (e.g. for TAD), with the SourcePoint 10 he departed from his earlier designs. For the first time he implemented a two-way system with a 25cm cone. The tweeter installed in the center of the cone of the woofer is a 1.25 inch soft dome. Because of its wide surround and powerful voice coil arrangement it fits in perfectly at the musically important transition point above 1600 Hertz. The SourcePoint 10 is powered by a double magnet system, which MoFi calls „Twin-Drive" for short. Whose ingenious construction contributes to the fact that the loudspeaker has a exceptional clarity and amazingly authentic bass response. „It's not enough to just optimize the frequency response of the woofer and tweeter" explains Andrew Jones. „It is also crucial to minimize any distortion in the drive system." The shape of the real wood-veneered cabinet with a baffle around five centimeters thick was created by MoFi according to acoustic aspects. The faceted front therefore protrudes noticeably from the classic housing. So diffraction effects that color the sound are largely avoided. The housing, braced on the inside, is made of around 2.5 cm thick MDF panels and has an impressive volume of 50 liters. Thanks to its size, the SourcePoint 10 offers an authentic bass reproduction, which goes down to a real 42 Hertz. 91 dB efficiency and 8 ohm speaker impedance promise a speaker that works even with less powerful amplifiers.

The MoFi SourcePoint 10 is now available in Germany at a pair price from 5000 euros, matching stands cost 800 euros per pair.

Contact: Mobile Fidelity Sound Lab, Chicago, IL, USA
Internet: mofi.com



New Thorens turntable

Thorens presents a new belt-driven manually operated turntable for music lovers with demands. The TD 204 incorporates all attributes of a turntable with high-end properties at an extraordinarily favorable price-performance ratio.

The surface versions „black high gloss“ and „walnut high Gloss“ seamlessly blend into the existing range with the design typical of Thorens.

The newly developed TP 120 tonearm impresses with its high quality bearing technology. The bearing play and the coefficients of friction could be brought to an astonishingly low level for thi pice range through the use of modern bearings. The TP 120 is a real 9" J-shape aluminium tonearm with an effective tonearm mass of a little over 15 grams. The detachable headshell with SME connector is equipped with a AT95E pickup model from the Japanese specialist Audio Technica. The skating compensation is carried out via a spring.

The connection terminal on the back shows high-quality RCA cinch jacks for a solid connection to the amplifier. An integrated (switchable) Phono-Pre allows direct connection to a high level input.

The turntable, which is precisely manufactured from die-cast aluminium, is set in motion by a precision-ground drive belt. The frame of TD 204 rests on four anti-vibration feet.

Contact: Thorens, Bergisch Gladbach
Internet: Thorens.com

HiFi LP Legends

Phono Preamplifier

Burmester 100

Dieter Burmester took 27 years to present a device of this type again after his first phono stage "838". Finally, in 2010, the "100" model was ready for the market and to this day is a worthy statement by the Berlin manufactory in terms of pickup signal processing. The symmetrically constructed device can be equipped with two MM or MC input modules, the extensive pick-up adjustment is carried out by remote control from the armchair, the device can automatically compensate for channel differences with the enclosed measuring record, and is able to control a power amplifier directly thanks to the built-in volume control. This equipment package has not lost any of its topicality to this day, nor has the excellent sound of the device.

- Distribution: Burmester, Berlin
- Phone: +49 30 7879680
- Internet: burmester.de

It Is Back!

Every music enthusiast of a certain age knows Dual, once the benchmark and a global brand name in analog technology. After turbulent decades, the company is now sailing in calmer waters again, showing that it has not forgotten anything.

2
2.5
3
3.5
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Even with its dust cover, the CS 429 looks classically good. Appearance and build quality leave nothing to be desired

For many decades, Dual was a fixed star not only in German analog history. There was confusion about the Dual brand name in the past years for entirely understandable reasons. I think it's time to bring some order into the confusion based on my report about the new Dual CS 429. For this purpose, I have talked at length with Alfred Langer, who may be known to many readers as „Dualfred" and who has thankfully provided me with crucial information.

Since the ‚70s of the 20th century, a major Japanese offensive on the European market for consumer electronics caused many bankruptcies, and in 1982 it was Dual's turn. The French conglomerate Thomson-Brandt, which had previously bought Nordmende, Saba, and Telefunken, swallowed up the company. Alfred Fehrenbacher GmbH in St. Georgen, a Dual supplier, took over parts of the machines and ultimately produced Dual turntables with them until

Classic dual gear mechanism and the hardened steel axle in its brass bushing: solid analog technology

2021. There were no innovations in these almost 40 years. These were not to be expected from Thomson-Brandt, and so the subsequent insolvency followed, combined with the takeover by Schneider Rundfunkwerke in 1988. The fact that televisions were offered under the Dual name gives a deep insight. Consequently, the last Dual plant in St. Georgen was closed in 1993, and Fehrenbacher now manufactured all Dual turntables for Schneider. But the inevitable happened: Schneider sold the Dual brand to Karstadt, retaining only the rights to use purely analog Dual turntables.

In 2003, the current Dual owner DGC, founded by former Schneider employees, finally came on the scene. At first, they brought some Dual models with license and usage rights to the market. Then in 2007, DGC acquired the trademark rights and granted Fehrenbacher „a simple license (...) for their turntable production under the Dual name“ (text from Dual website). Finally, in 2018, Dr. Josef Zellner, another former Schneider employee, became the managing partner of DGC after buying Dual GmbH from a former colleague, setting the crossover for the future. In 2021, Fehrenbacher finally went out of business, and Dual GmbH made it legally clear that they were the sole producers of Dual turntables.

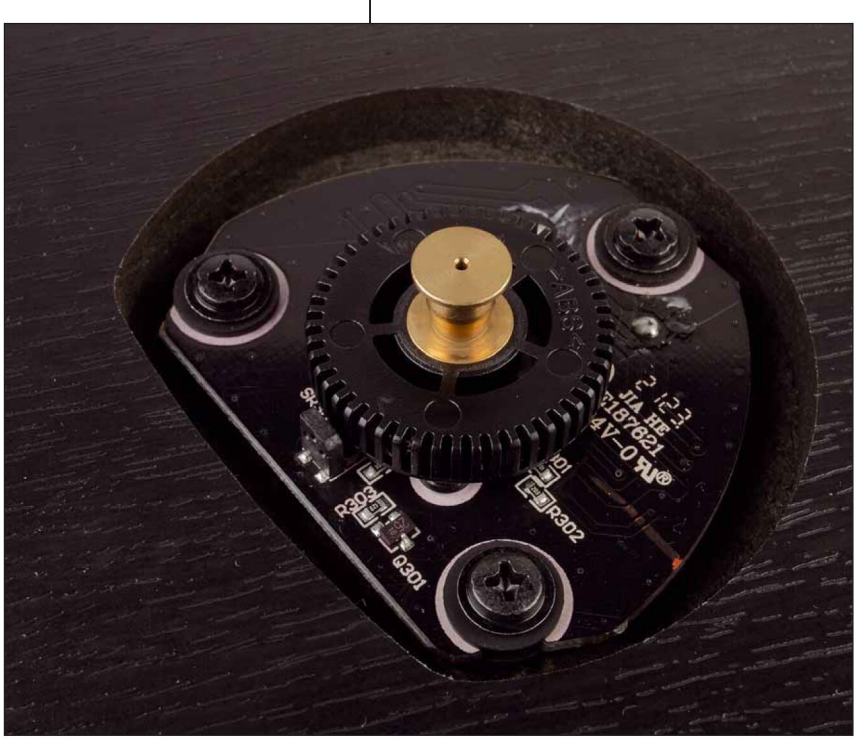
Supplied and perfectly pre-assembled: the proven good all-rounder 2M Red from Ortofon

This is how the platter looks from below after unpacking: the belt is already wrapped around the running surface, and through the opening, you can loop it around the motor pulley

And this is where we briefly jump back in the timeline and come to the next logical step in recent Dual history. Namely, since 2019, Alfred Langer has been the Head of Development and product manager at DGC, specifically at the „Dual Design Center“ in Kiefersfelden. Langer had acquired, which is why he and his website are known as „Dualfred,“ a substantial Dual spare parts stock from the Schneider insolvency estate and was thus the natural choice for this job. In addition, he is a mechanical engineer and manufactures his own high-end drives. Most of the new Dual models are manufactured as „Designed in Germany“ in China and a smaller one as „Made in Germany“ in Kiefersfelden. The current top model in this series is called „Primus Maximus“ and is manufactured in a strictly limited edition of 100 units to customer order. Further models are in planning.

If you turn up your nose at the mention of China, another explanation is needed. And it has to do with Taiwan because that‘s where the origin of today‘s Dual production can be found. The Taiwanese company Namsung had already secured the Dual trademark rights for Asia and the USA at the end of the 1990s, where they still trade as „Dual AV“ today. And as smart businessmen, they had already invested before the start of the analog boom and built tools that - unlike in the Black Forest - enable the production of turntables at today‘s top level, especially the complicated (cam wheel) mechanisms for automatic turntables. Only the actual manufacturing happens in China.

The CS-429 is a new model. Visually, it is recognizable as a „classic“ Dual, with its tidiness and the bottom tray, which reminds me of my first real turntable, the Dual CS 714Q (MC) - funnily enough, one of Alfred Langer‘s favorites. Setup is quick; even novices should be able to do it thanks to the well-done instruction manual. One example: The belt is conveniently already looped around the running surface of the aluminum die-cast plate on the bottom. At one point, a red band is wrapped around it and fixed in place. You carefully place the platter on the bearing without the mat



Here, the brass motor pulley is waiting for its belt. The material guarantees good running surface smoothness. Underneath the DC motor is working

and turn it until the red bar appears in its recess. Now all you have to do is pull the belt over the motor pulley, remove the ribbon, and put on the rubber mat. This is cleverly done.

The tonearm has a classic ball bearing and is made of an aluminum alloy, and its bearing block is made of die-cast zinc. The bearing force adjustment works statically via the counterweight after you have balanced the arm. The anti-skating should be set to approximately the same value as the contact force, in the case of the 2M Red between 1.6 and 2 grams. Less is more in this case.

The tonearm cannot be adjusted in height, so if you want to install another cartridge, you must pay attention to the same height as the Ortofon. Once the hood is in place, there is only one decision: do you want to use the internal phono equalization or a custom solution? If the slide switch is set to „Phono," the cables should be connected to the phono input of your amplifier or phono preamplifier. I thought this activated the internal phono solution, but that is in use when the switch is set to „Line." I can well imagine that most buyers of the CS 429 choose this option because although by the vinyl boom, even AV receivers got phono stages again, there are nevertheless many devices without. Thus, the Dual can play its strengths as a complete solution fully. I tried it out, of course, and it does its job well. However, it could be better; I'll get to that momentarily. The DC motor does its job just as quietly as the hardened steel axle in its brass bushing. The foiled MDF frame rests securely and with little interference on elastomer-damping feet.

Well-made tonearm with a perfectly readable scale for the contact force on the counterweight. This is also neatly made

Both manual and, of course, automatic operations are foolproof. The fine speed adjustment is made electronically, and shellac fans are also catered for with the 78-rpm option. The fact that the CS 429 plays records cleanly and safely with stoic calm gave me the bizarre idea of hooking it up to an extremely high-quality system. While this unlikely combination will never happen, it shows that the Dual can fit beautifully into such a setup. Well, I still have to tell you the combination, of course. Next to the CS 429 was the new, incorruptibly good Accuphase E-800 integrated amplifier, including its phono board. The speakers were the wonderful LS 3/5a from Harwood Acoustics. Used in this way, Carlotta Gamberini's „Lover Man" produced a really cool sound: Bass rich, transparent vocal reproduction, believable dynamics, and stage. So, I put on the beautiful live version of „My One and Only Love" by Michael Brecker and could immerse myself in his saxophone genius. I would not have expected that, and I can't get the grin off my face.

Christian Bayer

The CS 429 is not only good to work with, whether automatically or manually, but above all, it allows you to play and listen to your favorite records with pleasure

Dual CS 429

- Price: 649 Euro
- Distributor: Dual, Fuchstal
- Phone: +49 8191 9157770
- Internet: www.hifi.dual.de
- Principle: Belt-driven turntable with DC motor and optical speed control
- Modes of operation: manual and automatic
- Speeds: 33, 45, and 78 RPM
- Synchronization fluctuations: < +/- 0.08% (DIN rated)
- tonearm: aluminum ball bearing tonearm; effective length 221.5; overhang: 19 mm
- platter: die-cast aluminum
- Special features: built-in phono preamplifier
- Warranty: 5 years
- Weight: approx. 6,2 kg

lp

Dual CS 429

International 1/23

» It's back! Or better: Dual is back. The CS 429 is a posh automatic turntable of old school and latest design. It convinces with smooth operation and amazingly smooth sound that even old analog hares like me really enjoy.

Otherworldly

Where the hell have these electronics been all these years? Why have we been deprived of these magnificent, innovative, and very different amplifiers until now?

PREAMPLIFIER
PHONO EQUALIZER
M-3

A total of four cartridges can be operated simultaneously on the E-2

Soulnote in Germany

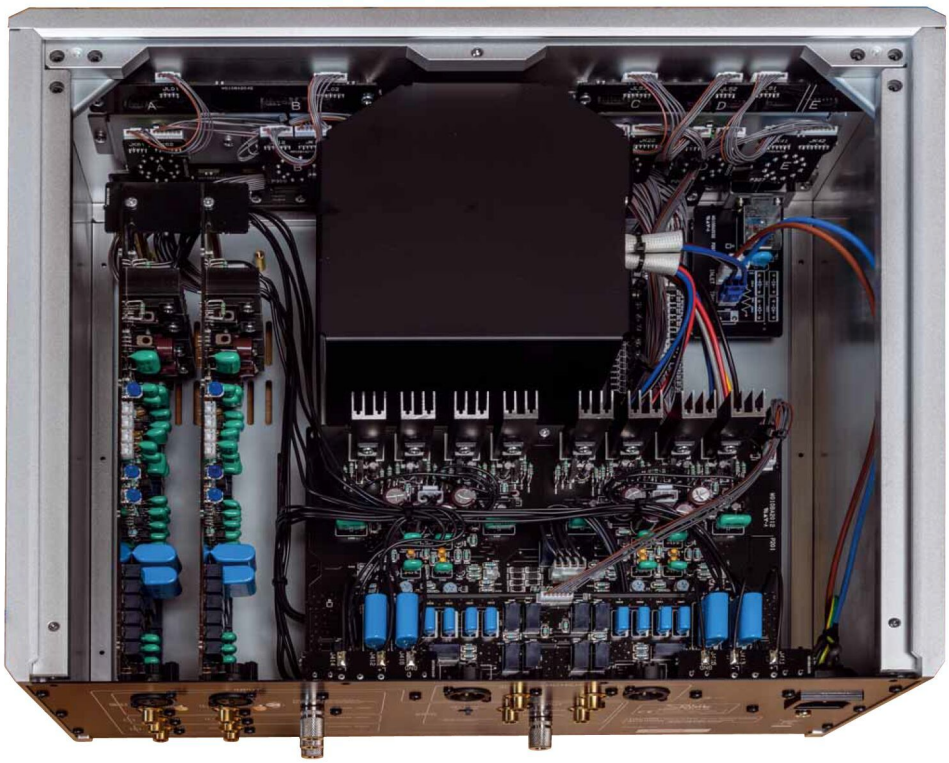
Probably thanks to loudspeaker developer legend Karl-Heinz Fink this circumstance has changed. With his excellent connections worldwide and a healthy childlike curiosity about everything that could be exciting in terms of HiFi, a couple of Soulnote devices ended up in the Essen listening room at some point. Connected with a Karl Heinz-typical dry call with the content: „Listen to this; it's really good." I couldn't argue with that, and things took their course. Consequently, there is now a distributor for Japanese electronics in our country, IAD. For the debut, chief developer Hideki Kato toured the entire republic, presented his devices in many places, and gave exciting insights on how to achieve good sound, in his opinion. I had the honor of being the first in Europe to look closely at Soulnote's biggest devices, for which I would like to take this opportunity to thank him once again. The last few months with these devices have been magical.

For old records, you can "bend" the equalization of the E-2 almost any way you like

Company and products

Soulnote is a brand of the company „CSR," founded in 2004 by former Marantz employees. Kato-San, who has been Chief Sound Manager at the company since 2016, can look back on a long career in the Japanese audio business, having worked there since the late 1980s. He is credited with various renowned equipment in both the digital and analog audio fields.

Kato is driven by the realization that improving metrological performance does not help the sound, sometimes even worsening it. He considers classic static distortion measurements, for example, unsuitable for assessing audio equipment quality. Here, dynamic aspects must be considered, which are very difficult to determine. This attitude coincides with that of a bunch of developers of excellent devices I have met over the years. If you are looking for labo-



Considering the effort put into it, it's hard to believe that the E-2 doesn't even belong to Soulnote's top series

ratory superlatives, you will not find them at Soulnote. There are currently three product lines in the Soulnote lineup, meaningfully ending in 1, 2, and 3 for the type designations. We deal here with the phono preamplifier from the two-series (there is currently no bigger one) at 7,500 EUR, and the preamplifier (21,000 EUR) and the monos (40,000 EUR per pair) come from the three-series.

Mechanics

A unique feature of Soulnote devices is their mechanical design: Kato-San does not believe in decoupling his electronics from any environmental influence in vault-like packaging. Although the heavy devices are clad in plenty of aluminum and steel of the finest design, many elements are not firmly connected. Housing covers, for example, are always unfastened. They are stuck in slots and are not screwed tight. This takes some getting used to, especially in my home setup: My solid plank floor vibrates quite a bit when you move through the room at a somewhat more solid pace. The lids of the Monos rattle unabashedly. However, Kato demonstrated convincingly during his visit that the units sound noticeably worse with the cover firmly attached: The room imaging loses a bit, and the soundscape becomes a bit „grayer." Astonishing.

Teammates

Turntable:
· TechDAS Air Force III / Reed 3p

Cartridge:
DS Audio DS E1 / DS 003 /
Ortofon Per Windfeld Ti

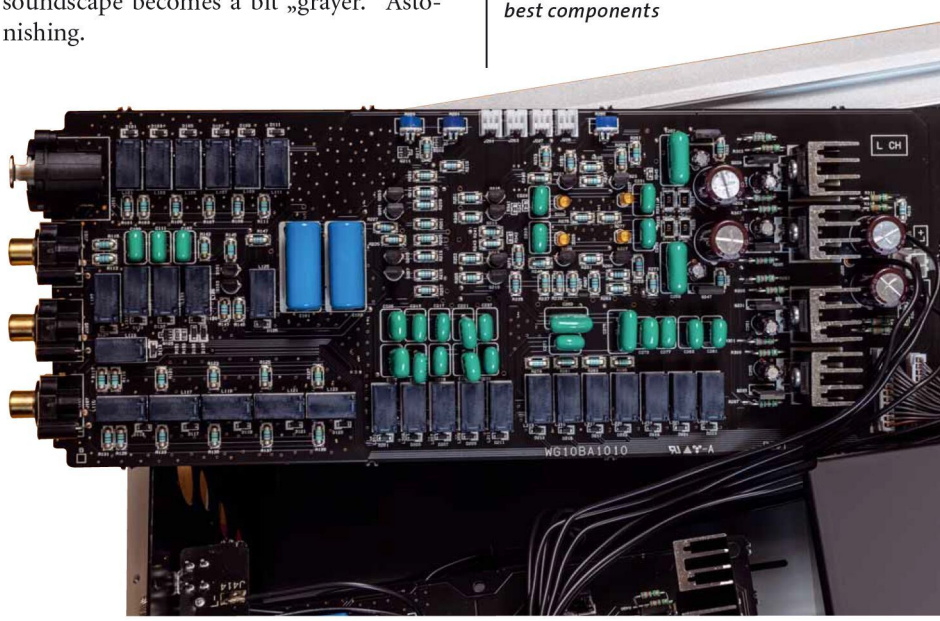
Loudspeaker:
DIY Focal / JBL
Wolf von Lange Prototyp

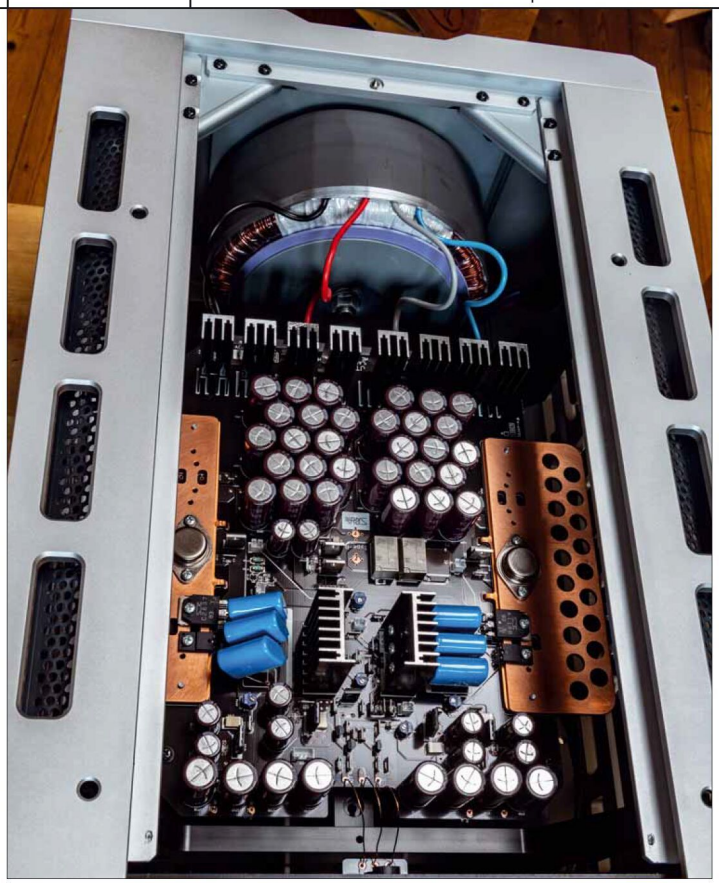
Competitors

Phono preamplifier::
DS Audio DS E1 / DS 003

Preamplifier:
Mal Valve preamp three line
NEM PRA-5

One channel of the MC/MM amplification. Exclusively discrete and realized with the best components





The power supply concept of the monos resembles that of the other components

The phono preamplifier E-2

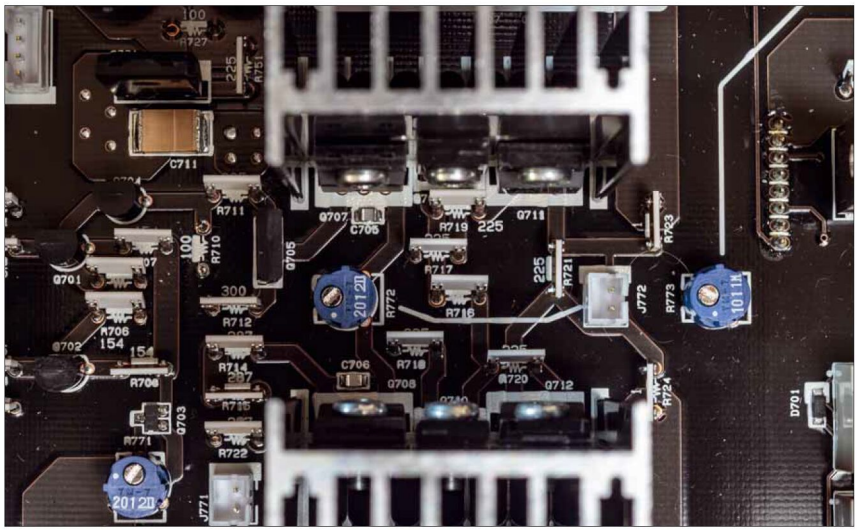
What distinguishes the Soulnote phono preamp from almost all other devices of this species on the market is that it can handle not only MM and MC cartridges but also the electro-optical cartridges of the Japanese manufacturer DS Audio. Which, as you know, I consider to be the most exciting thing currently available for extracting information from a record groove. But that's not all: One of the two „normal" inputs is also available in a symmetrical form, and there are balanced outputs anyway. Switchable equalizer curves for records from the time before the RIAA standard? But yes! However, you can't simply switch between the label-specific curves, as is usually the case; instead, you have

The mono power amplifiers can only be driven with symmetrical signals

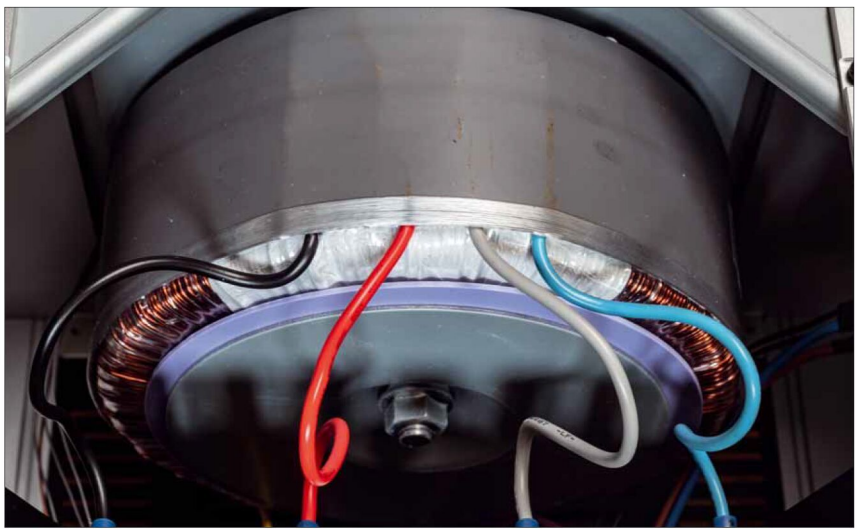
to combine the appropriate time constants via three rotary switches. This results in an unmanageable number of possibilities – and a not to be underestimated research job to find the parameters that fit a record.

Switching between MM and MC cartridges is done by pressing one of the two switches for the termination capacitances. If such a capacitance is activated, the device automatically switches to MM. The gain, in this case, is a whopping 52 decibels but can be lowered via the „Low Gain" button - by the way, this applies to all operating modes. Experience has taught me, however, that the unit plays noticeably livelier with unrestricted gain. MCs are amplified at a whopping 72 decibels; again, I'd be careful with using the cut. A rotary knob lets you select termination impedances between three ohms and one kiloohm; again, there's a clear preference for low-output and low-impedance cartridges. Such things are unnecessary when connecting a DS Audio cartridge; here, only the operating voltage needs to be activated via the slide switch on the back.
Still not enough possibilities? No problem; there is still a switchable rumble filter, a mono button, and the option to turn the absolute phase. Now that's a features bundle.
A look inside the unit reveals a central, well-shielded power supply with a substantial 400VA toroidal transformer and a multitude of electrolytic capacitors connected in parallel to reduce the internal resistance. All amplifier circuits are discrete with single transistors and avoid negative feedback like the devil avoids holy water. Symmetry is the top priority, and local voltage stabilizations abound. The same applies to the completely separate opto preamplifiers.

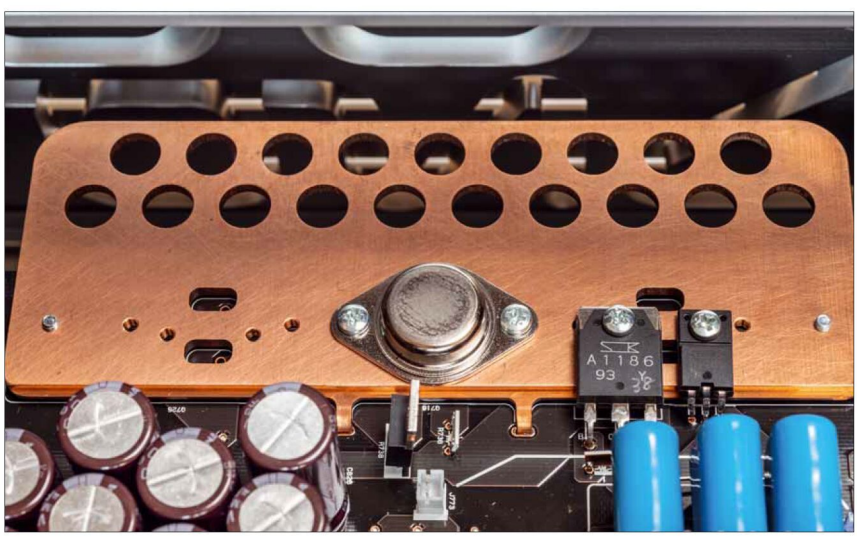
I first listened to the E-2 alone, with a DS Audio cartridge. With resounding success: Both with a DS E1 and a DS 003, the machine leaves the DS Audio equalizers no chance. Especially with the DS E1, the considerably lower noise level is striking; in both cases, there's a much smoother, more detailed, and smoother reproduc-



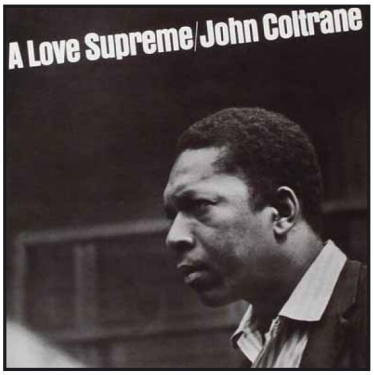
The M-3s also feature clever circuit ideas, exclusively realized discretely and with foil resistors



The power transformer of the M-3 is grossly over-dimensioned with 1600 VA



The large metal transistor forms one-half of the actual output stage, the other two next to it are the drivers



John Coltrane – A Love Supreme

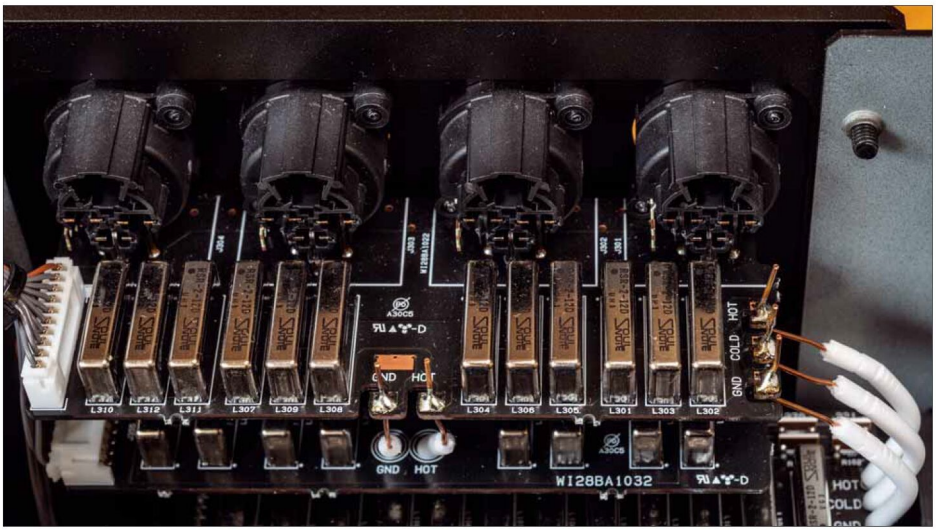
What we played

John Coltrane
A Love Supreme

Neil Young
Live At Massey Hall 1971

UFO
UFO2 Flying

Monk Big Band And Quartett
In Concert



Non-compromise input selection: all three signals of the XLR connectors are switched

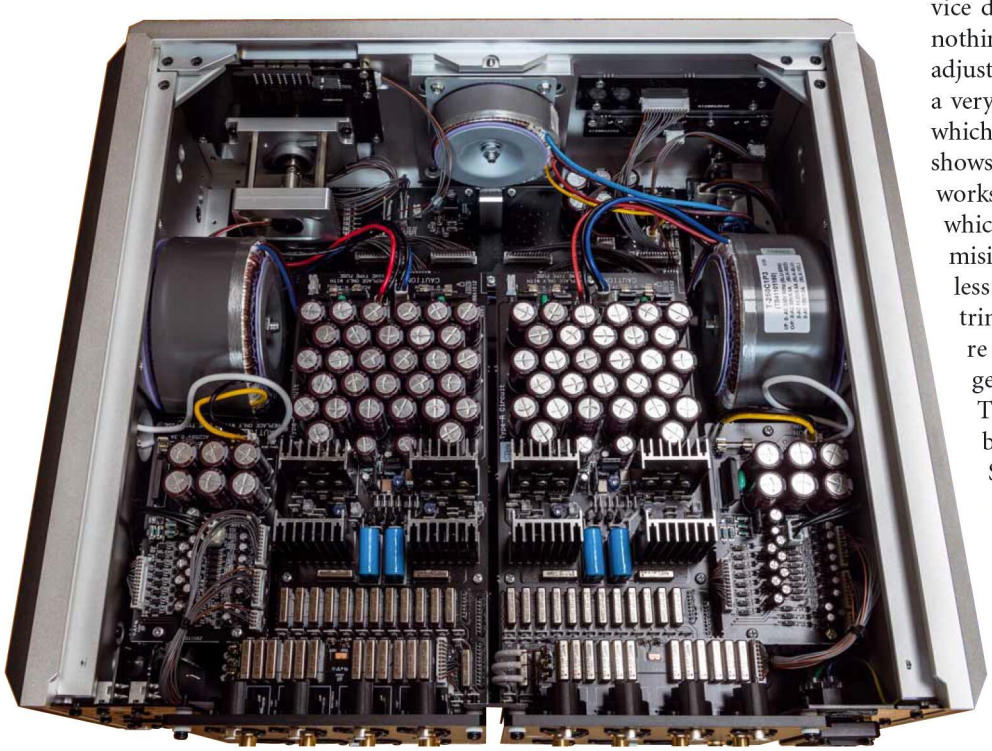
tion. The electro-optical cartridges' undoubtedly fascinating slight „angularity" has disappeared here. The tendency towards a smoother and extremely complex character can also be noticed in MC operation. This plays into the cards of the Ortofon Per Windfeld Ti; it sounds stunning here. Usually, I only get to this point with tubes and transformers.

The preamplifier P-3

The large Soulnote series goes one or two steps further in terms of complexity. Of course, symmetry is also the trump card here. The device has four XLR and RCA inputs, and three XLR and one RCA are available on the output side. Remote control? Yes, it's included in the scope of delivery.

In terms of operation, the 25-kilogram device does not pose many riddles; there is nothing more to do than switch inputs and adjust the volume. The latter is done via a very easy-to-operate rotary knob, above which a pretty old-fashioned LED display shows the level. The 144-step level control works with resistors switched by relays, which is probably uniquely uncompromising: As resistors, super noble houseless foil resistors are used, individually trimmed to their setpoint by laser. There are 156 of these sinfully expensive gems in the device. But that's not all: The switching processes are handled by reed relays specially developed by Soulnote. These extremely durable and neutral-sounding switching elements are present in the P-3 94 times.

Three power transformers and many small electrolytic capacitors supply the P-3 with power



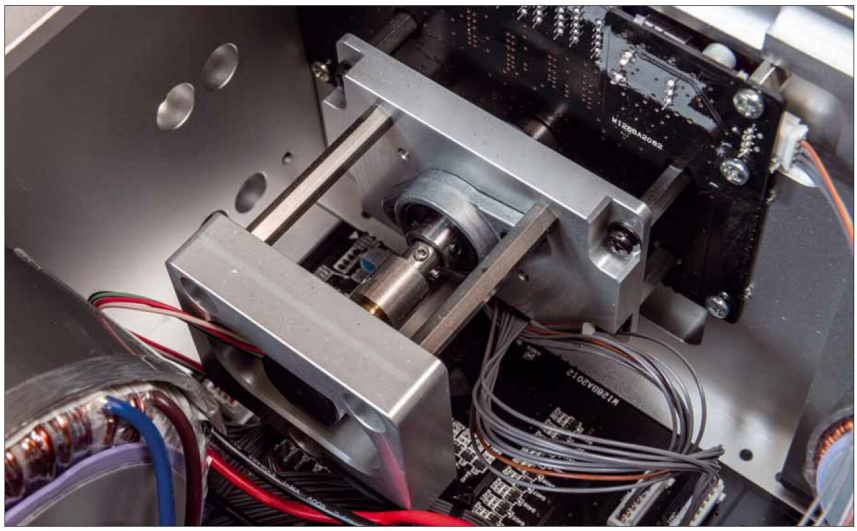
The device is realized as consequently as possible in double mono construction. Each channel has an enormous toroidal transformer. Here, too, largely feedback-free discrete circuits are used. The unit comes with a solid birch wood stand platform, into which the unit literally digs itself in with the needle-pointed spikes that are screwed in during commissioning. I like to believe that because I didn't want to ram these spikes into anything else for comparison.

The M-3 Monos

The M-3 mono power amplifiers are perhaps the most impressive components of this quartet. Despite a stately output power of around 100 watts into eight and 160 watts into four ohms, they do not consume vast amounts of energy; at idle, the current consumption of a monoblock is clearly in the double digits. A massive 1600 VA transformer feeds a distinctive amplifier circuit that comes up with a unique output stage: Two single-ended circuits operate here in push-pull mode, and the output stage consists of only a single transistor per side. The transistor shares its surprisingly small copper heat sink with two hardly less potent driver transistors. The heavy power supply is decoupled from the rest of the unit and resides on three needle-sharp spikes, which poke into a birch wood base. The unit must be driven symmetrical. Otherwise, the signal split between the two single-ended halves would not work.

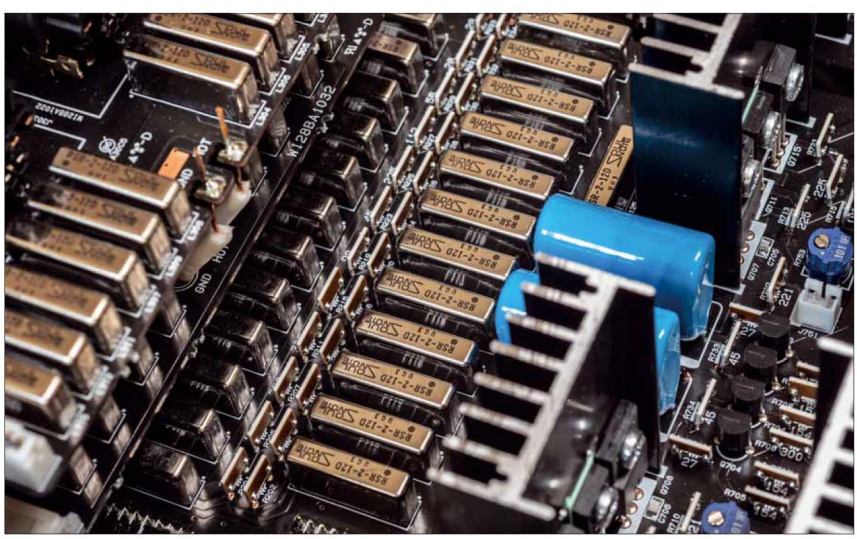
Sound

What was already apparent with the phono preamplifier becomes a certainty in combination with the other Soulnote components: The devices deliver an outstanding performance that can only be compared to the very best tube amplifiers, and that reminds me in many ways of the great Air Tight combo that I was allowed to accommodate for a long time. The Soulnotes display a similar smooth yet extremely subtle



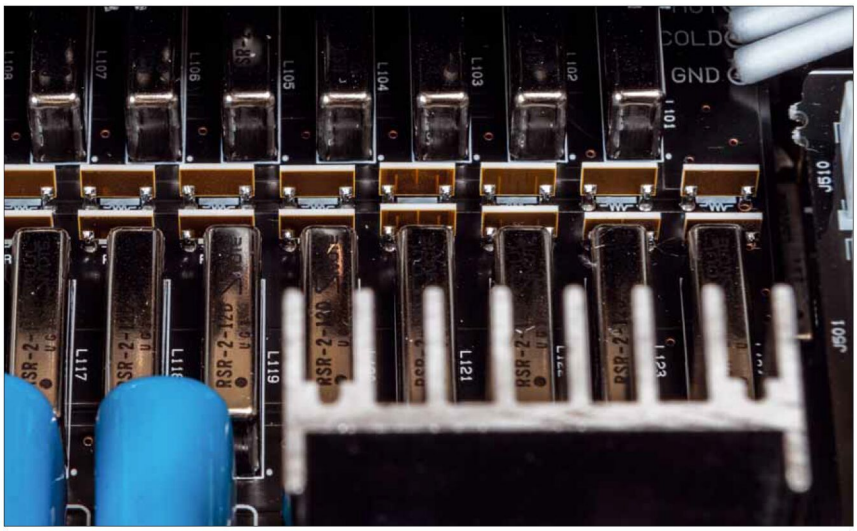
Behind the volume knob is a high-quality rotary encoder

Even the mains input socket is mounted mechanically decoupled



Nearly one hundred relays developed by Soulnote are in the P-3

The „normal“ feet are intended for moving the units around, the spikes are for critical listening



Expensive foil resistors form the heart of the extremely complex level control unit

Measurements

Lab commentary

We only measured the P-3 for logistical reasons, but we are sure the other devices would also not show any problems. The P-3 is linear and broadband; the minus three-decibel point is above 200 kilohertz. The total gain that can be achieved is only four decibels, which is sufficient in practice. The signal-to-noise ratio at one volt at input and output is a moderate 62.3 decibels(A), the channel separation is probably higher, but this cannot be measured due to the residual noise. The distortion at one volt and one kilohertz is 0.18 percent. The high overload resistance is striking; the device also copes well with 13 volts at the input and output, and the distortions even drop by orders of magnitude.

and emphatic character. Even emphatically powerful recordings like Coltrane‘s „A Love Supreme“ sound extremely lively but not harsh, immensely differentiated, and natural.

Any kind of technological touch is alien to the soundscape. It simply fills the room with music with the utmost naturalness. Neil Young‘s legendary Massey Hall concert from 1971 conveys an almost frightening feeling of being there, the legendary jam session „26‘30““ by the British hard rockers UFO on „UFO2 - Flying“ never smelled so much like the consumption of mind-expanding substances as here. Wow - what a performance!

Holger Barske

Eight inputs, four outputs – that should be enough for all circumstances

Soulnote E-2 / P-3 / M-3

· Price	68,500 Euro
· Distributor	IAD, Korschenbroich
· Phone	+49 2161 617830
· Internet	iad-audio.de
· Warranty	2 years
· Dimensions (W x H x D)	430 x 160 x 410 mm (E-2), 454 x 174 x 430 mm (P-3), 340 x 251 x 512 mm (M-3)
· Weight	approx. 20 / 25 / 31 kg

LP

Soulnote
E-2 / P-3 / M-3

International 1/23

» Welcome amongst the few manufacturers of absolute world-class electronics, Soulnote! The devices are designed pleasantly differently, and the result fully justifies the effort made.

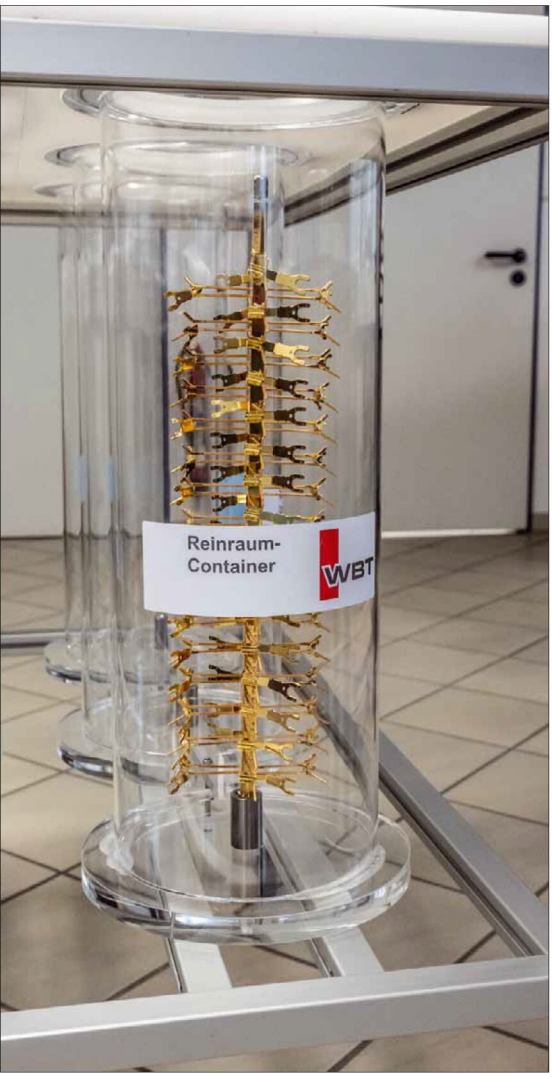
News from the Plug Pros

No one would seriously doubt that the audio connectors from the Essen-based manufacturer WBT are in a class of their own. There are reasons for this, and there are more and more: At WBT, constant progress is the order of the day.

Here, the air is extracted from the new vacuum transport containers

Preface

Fortunately, it only takes 20 minutes to reach the hallowed halls of WBT in the Kettwig district of Essen from Duisburg. And even if there is no brand-new product in the starting blocks, it is worth asking how things are going here from time to time. Company boss and name-giver Wolfgang B. Thörner, an engineer and product developer through and through, has taken up the cause of „process development." In other words, the aim is to optimize existing processes. It's about making them faster, more effective, and – he attaches great importance to this – more environmentally compatible.



In the clean room containers, polished parts can be stored temporarily without problems before coating

Electroplating vs. PVD technology

We remember the last major innovation with which WBT supplied the hi-fi world. It concerned how the gold surface is applied to the connectors. Gold is still an optimal solution due to its corrosion resistance, but applying it to contact surfaces is difficult. The entire connector world market - not just the tiny hi-fi corner - gilds its surfaces electrochemically (galvanically). For this to work well, a nickel intermediate layer must still be applied to the carrier material. This is not optimal because of the magnetic properties of nickel, and the two additional „microstructure transitions“ also have a detrimental effect.

For this reason, WBT made considerable investments a few years ago to deposit gold directly onto the substrate using the „PVD“ (Physical Vapor Deposition) process. The advantages of the process are undisputed: The coating is more durable, thinner, and more homogeneous. It is also far less harmful to the environment than electroplating processes, which use more troublesome chemicals.

The electropolishing system creates perfectly smooth surfaces and operates very energy-efficiently

Brand new: this plant is for the recovery of "misdirected" gold

The process is running smoothly, and all WBT gold surfaces are now produced this way. We reported in detail on the process and its advantages at the time.

Progress in detail

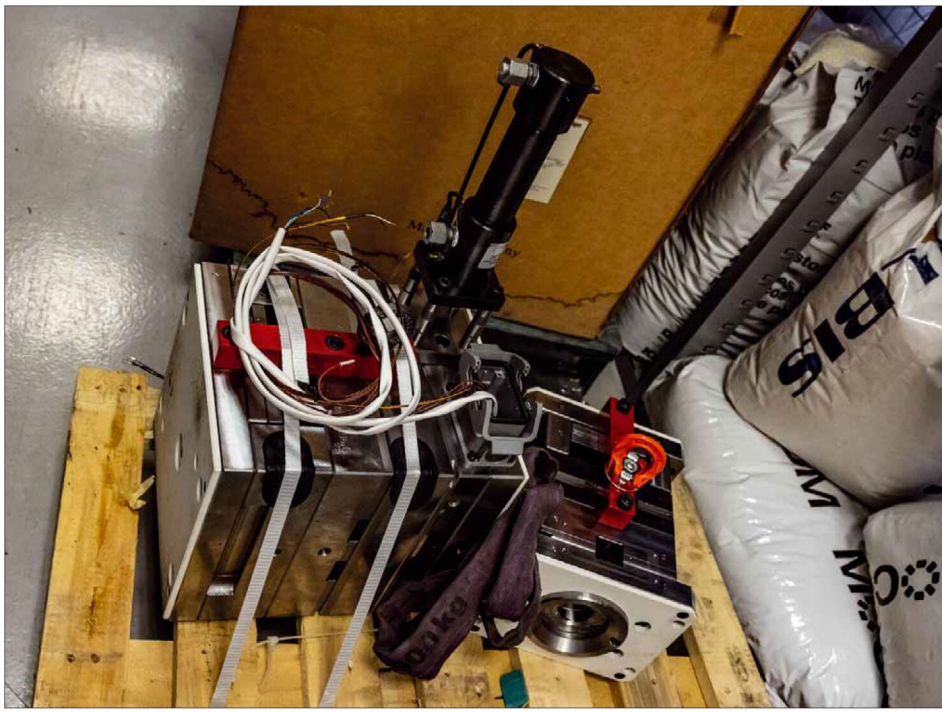
For the PVD process to show truly perfect results, the „substrate," i.e., the surface to be coated, must be clean and smooth. In addition to the coating itself, cleaning and polishing processes are the two other crucial procedures in which WBT has made significant progress in the recent past.

And what do you, as a user, get out of it? A better product and a cleaner conscience. The former is because the electrically polished surfaces are now so smooth that they form an alloy-like bond with the gold coating. No other technology allows two mate-

Overmolding metal parts with plastic is a process that WBT has perfected over the years

rials to bond so intimately, which benefits both signal transfer and long-term stability. Adding to the conscience is that WBT can deposit 80 percent of the gold used on the workpiece. Elsewhere, PVD technology achieves just 20 percent, representing a considerable cost factor in production. But that's not all: WBT has now put a gold recovery system into operation that further minimizes material losses.

The electropolishing process is also interesting: Although it operates at high voltage (330 volts) and high current (600 amperes), the process takes only 40 seconds for 70 connectors. The resulting energy requirement is 2.2 kilowatt hours, so the energy requirement per component is gratifyingly low.



The injection molding tool for the new RCA connector, which is not quite finished yet

The cleaning procedure for the contact elements also includes a pass in the ultrasonic bath

This is the new RCA connector WBT 0120: Series production is expected this year

Outlook

WBT has come a long way in optimizing its processes, in many respects, farther than any other user of PVD technology. Of course, this does not remain without consequences for product development: Why does it always have to be gold on copper? Efforts are being made to coat non-conductive materials with gold, which opens up new possibilities in the small-signal range. Moreover, anyone who can transport electricity via contacts as efficiently as WBT is naturally also thinking about applications other than those in the audio sector: electromobility is a huge topic here.

For the time being, the Essen-based manufacturer will remain committed to euphony and continue to develop its products. The most recent example is the WBT0120 nextgen RCA connector, where the collet locking mechanism, which can be locked by turning, has been replaced by an uncomplicated clamping lever on the side. The prototypes are already feeling good, and series production is scheduled to begin this year.

Holger Barske

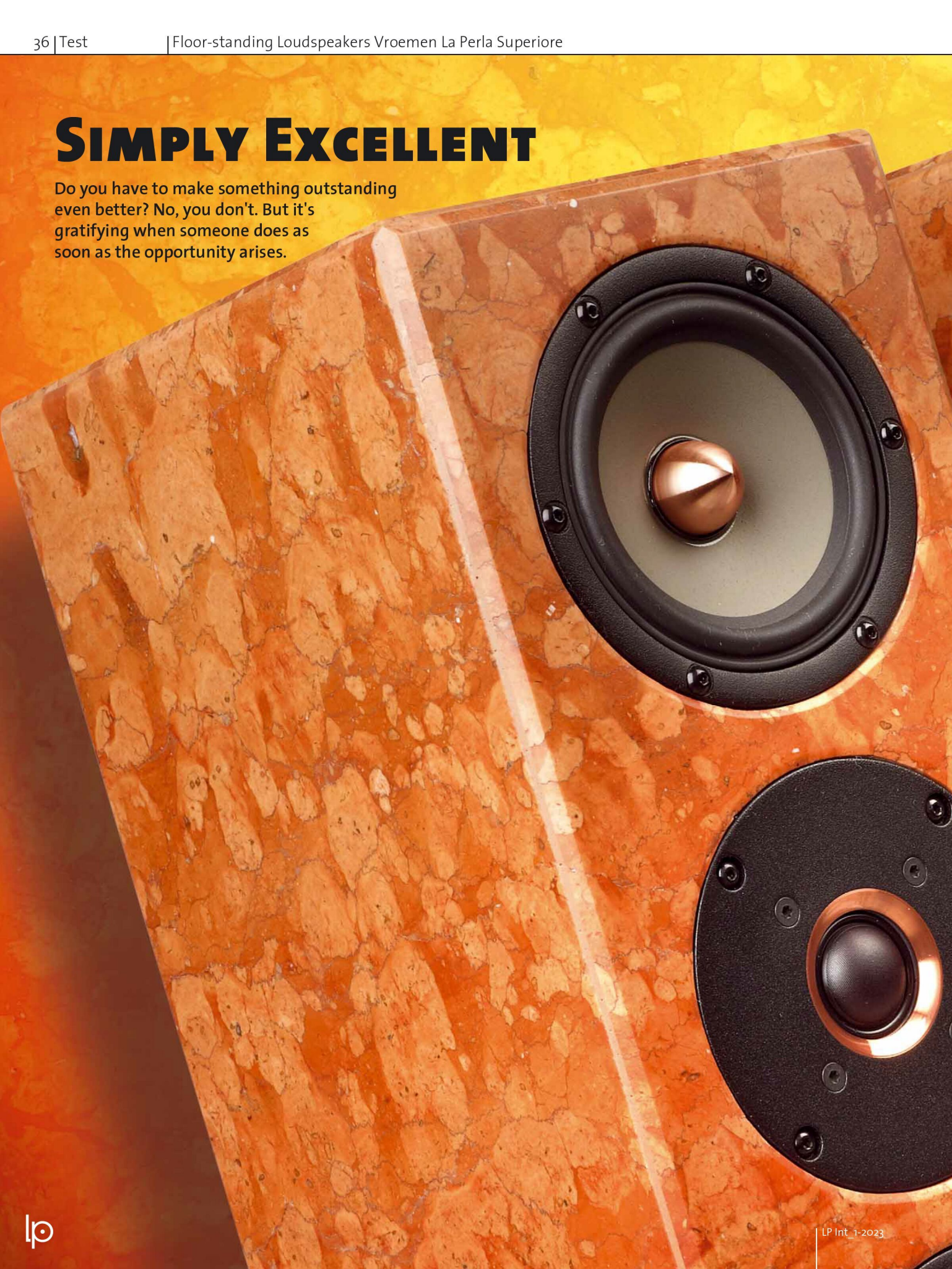
Here, WBT is carrying out tests with anodized aluminum as a contact carrier – it doesn't always have to be copper

WBT GmbH, Essen

· Contact WBT GmbH, Essen
· Phone 02054 875520
· Internet wbt.de

Simply Excellent

Do you have to make something outstanding even better? No, you don't. But it's gratifying when someone does as soon as the opportunity arises.



Every year at the „Fine Arts“, Bernd and Junior Robin Vroemen present their exquisite loudspeaker systems in the unique ambiance of the „Kabinettkeller“ of Kloster Eberbach

The technical innovation is not visible in the woofer, but here a graphene layer covers the magnesium cone – so there is even less distortion

Do you think I'm speaking in riddles? Let me explain, even if I have to elaborate a bit: It was almost 13 years ago that an esteemed colleague was allowed to test an unusual loudspeaker: It caused quite a stir in the publishing house since the cabinet was made of stone - by the way, this was not the only reason why, despite its dainty dimensions, the speaker always had to be dealt with by several strong men. We also liked to get together in small groups while listening because the sound performance of the „La Perla Superiore“ was extraordinary.

But let's start from the beginning: Bernd Vroemen from Baesweiler has been involved in loudspeaker construction since the late 80s. Around the mid-90s, it became clear to him that there could only be one optimal material for building speaker cabinets: Stone. So he created the first self-built loudspeaker cabinet made of Bianco Carrara marble soon after. This, in turn, was so well received by the customers of a local hi-fi dealer that the newcomer Vroemen

founded his stone loudspeaker company as early as 1995 and has remained faithful to „his“ material to this day. Of course, there have always been and still are other manufacturers who use stone slabs for loudspeaker cabinet construction. Still, none have done so as versatilely and consistently as Bernd Vroemen. There are solid reasons for this: Natural stone is not a natural material: Building with natural stone is not pure pleasure. The material is much too hard and brittle to be processed and worked with standard tools. So you must have the appropriate machines and experience handling them to create such a well-made end product as the Vroemen loudspeakers.

Add to that the challenge of sourcing: some of the genuinely stunning finishes I‘ve seen at Vroemen in recent years are generally or at least temporarily unavailable nowadays. Other stone varieties have breathtaking prices due to their rarity and demanding mining conditions, as in the case of Labradorite Lemurian and Onyx: Several thousand EUR per square meter are possible here.

For each Vroemen model, the customer can choose from more than 20 types of slate, marble, and granite his desired material. In addition, after consultation, custom designs of other kinds of stone are also possible.
The La Perla Superiore tested here has the Italian marble „Rosso Asiago“ as cabinet material. With its antique brushed surface, this reddish shimmering stone is one of the cheaper varieties for 5,200 per pair of speakers (from 5,000 EUR for other types of stone). This makes the La Perla Superiore very affordable - for comparison, the models tested over a decade ago cost EUR 5,600, albeit with a very exclusive slate, but much cheaper drivers.

And that brings us to the built-in technology, which is also exclusive. Bernd Vroemens‘ standard models are equipped with high-quality drivers from the Norwegian driver specialists Seas. For the deluxe Superiore versions of his speakers, the developer uses high-end drivers from the top brand Seas-Excel. Two 12 cm bass-midrange drivers with low-resonance magnesium cones play in a D‘Appolito arrangement in the petite La Perla Superiore, which weighs 40 kilograms. But that‘s not all: For the current Superiore generation, Bernd Vroemen uses the brand new Graphene drivers from Excel, which, so to speak, make possible the thinnest of all innovations in loudspeaker construction: an extremely thin cone coating with a thickness of only one molecule. The process is extraordinarily complex and exploits the unique properties of carbon to produce a pure and ultra-thin layer on the carrier material, right down to the atomic level. In fact, the graphene drivers are significantly better in terms of distortion and resonance behavior than the already excellent Excel drivers without the new coating.

Playback system

Turntable:
- Feickert Analogue Volare mit Ortofon SPU Jubilee

Amplifiers:
- Accuphase C-280
- AVM MA30.3

Only when looking very closely can you see the glued edges of the perfectly built cases

Carl Orff – Die Kluge

What we played

AC/DC
Back in Black

Johann Sebastian Bach
Goldberg-Variationen

Stevie Ray Vaughan
Couldn´t stand the Weather

Ludwig van Beethoven
Die späten Klaviersonaten,
Christoph Eschenbach

Peter Tschaikowsky
Klavierkonzert Nr. 1 b-moll,
Martha Argerich, Royal Philharmonic
Orchestra, Charles Dutoit

Wolfgang Amadeus Mozart
Waisenhausmesse, Claudio Abbado

Oscar Peterson Trio
We get Requests

Jazz at the Pawnshop

In the double assembly, the drivers with a diameter of only 12 centimeters provide a profound and dynamic bass

Rosso Asiago is the name of the type of marble used, which provides a distinguished elegance

We can not praise enough at this point that Bernd Vroemen builds these tidbits of chassis technology and passes them on to his customers in his noble stone housings close to the self-build price! Between these two gems, Bernd Vroemen places the famous Millennium dome from the same manufacturer. The outstanding fabric dome is still in a class of its own more than two decades after its introduction.

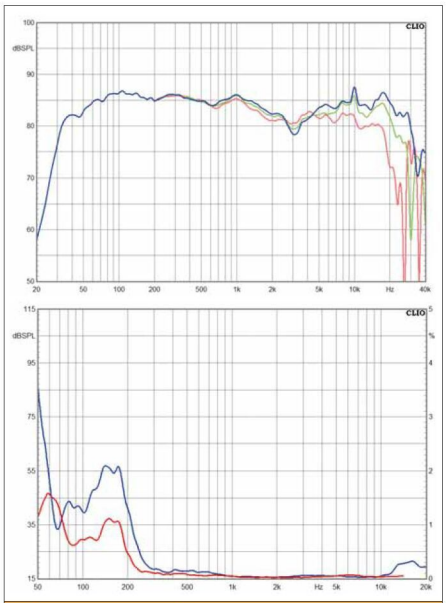
And this statement can be applied to the Stein loudspeakers. Short product cycles are not so much Vroemen's thing - once he has found something good, he remains true to himself and the product. Practical innovations - like the graphene drivers - yes, but not always changing something at any price. What's the point? In this way, customers can be sure that even an older model is up to date, and if in doubt, they can upgrade at any time.

Of course, high technical standards also contribute to the success, such as the filters of the speakers, which are exclusively equipped with noble Mundorf components, and the high-quality internal wiring.

The Millennium dome from Seas Excel has been the benchmark for two decades

At the 2022 Christmas Market at Gödens Castle, there was a HiFi-interested audience throughout, who were happy to be inspired by the sound quality of the Vroemen loudspeakers

The vent opens directly above the terminal – a pragmatic solution that also allows for maximum bass output



Measurements

Lab commentary

A balanced frequency response with good efficiency, very deep bass response, and balanced omnidirectional sound distribution. The distortion characteristics are excellent, and the decay is fast at all frequencies. The impedance curve is constantly above 5 ohms, posing no problems for any amplifier.

In the listening room, the construction material's high mass and low resonance result in a rock-solid, extremely quiet, and clean soundscape between the speakers, which is audibly tightened and purified by the non-resonating boxes. Regarding the slim enclosure, the bass range of the La Perla Superiore comes as a bit of a surprise: It goes down very low, yet the low tones remain extremely dry and allow for a dynamic range that we might otherwise only expect from much larger speakers.

The midrange of the two twelve speakers is just as precise and, above all, very neutral. The somewhat reduced presence range in the crossover tuning ensures a pleasant soundscape on the one hand and an incredibly stable spatial reproduction on the other, which stretches the virtual stage far in front of and behind the level of the placed speakers. In addition, there is a precise localization of voices and instruments that remains steadfast even during vicious dynamic attacks. A prime example of this is still the old reference recording of Carl Orff's „Die Kluge" by the nationally owned Eterna Music Production.

The always precise yet always elegant tweeter adds the appropriate highlights to the thoroughly accomplished sound of the La Perla Superiore. One thing led to another - so the one planned listening evening with the excellent Vroemen box turned into several, and – believe me – they became long.

Thomas Schmidt

Vroemen La Perla Superiore

· Price per pair	5,000 Euro
· Distributor	Vroemen, Baesweiler
· Phone	+49 2401 6058458
· Internet	www.vroemen.de
· Instagram	vroemen_highend
· Email	mail@vroemen.de
· Warranty	5 years (electronics) 10 years (Cabinet)
· W x H x D	160 x 1000 x 200 mm
· Weight	approx. 40 kg

Vroemen
La Perla
Superiore

International 1/23

» The "final" cabinet material, an excellent choice of drivers, and the successful tuning also make the model year 2022/23 La Perla Superiore an all-around great small floor-standing speaker.

When Less Is More

This is a lovely example of how far you can reduce the concept of an amplifier without really losing anything. Or is there even something to be gained from such an approach?

power
pure dynamics
power

The Class A Monos are content with housings in the classic mini format

Background

Regular LP readers will be familiar with the manufacturer of the two cute monos we're talking about: Pure Dynamics is a small manufacturer from Austria that has made a name for itself with modest but refined concepts for music reproduction. Some time ago, we had the compact „kiss" preamplifier series as a guest, which achieved much more in terms of sound than its inconspicuous physique suggested.

The „kiss pre" is also what the manufacturer currently recommends for driving the two mono power amplifiers, which so far do not even have a „proper" type designation and simply pass as „Class A Monos." But: There is still something to come. Something that is supposed to be more appropriate for the mini heaters, which cost EUR 6,750 per pair and will probably fit better optically.

But why transistor power amps? Pure Dynamics boss Georg Ruppert is a confessed tube fan and has, in the past, mainly appeared with devices with gently glowing glass pistons. Since he is also an advocate of „real" loudspeakers, i.e., those with decent efficiency and tube-friendly power consumption, this has always been a perfect fit. As we all know, procuring newly produced tubes has become very difficult, or at least very expensive. So Georg Ruppert decided to start looking into the semiconductor market. The result of these efforts is currently heating my living room with a constant 130 watts per channel - although I readily admit that I am used to much worse in this respect.

Looks

The mini-sized monos (23 centimeters wide) fit together on the footprint of a full-sized device but require a bit of caution when handling. The heatsinks attached to each side and the curved stainless steel sheet that acts as the front and lid are blessed with plenty of sharp edges and corners. However, visually and functionally, the design is very accomplished. Operation is straightforward and reduced to pressing the power toggle switch on the front of the device. Soft orange light signals readiness for operation.

On the rear is a pair of pleasantly straightforward banana jacks for the speaker connection, which the more grown-ups among us still know as „telephone jacks." There's the inevitable RCA jack on the input side and the mains power connector in the center. That's all.

Engineering

A look under said lid first reveals quite a gem of a toroidal transformer of acknowledged good Polish manufacture. With 300 VA, it is undoubtedly luxuriously proportioned. Surprisingly, the transformer supplies only one operating voltage, neatly rectified by selected single diodes and filtered by four posh Mundorf electrolytic capacitors. A highly reduced amplifier circuit is used as the „consumer" for the DC voltage obtained in this way. Here Ruppert's deep roots in tube technology shine through, for he has copied a so-called „SRPP" circuit. The abbreviation stands for „Shunt Regulated Push Pull" and is often used in tube technology with two triode systems as voltage amplifier and driver stage, but hardly in the power range. The transfer of the arrangement into the semiconductor world has succeeded excellently here. The lab gives the Monos a very good report card. In fact, there is only one power MOSFET on each of the two massive heatsinks; the

Teammates

Turntable:
TechDAS Air Force III / Reed 3p / DS Audio DS003

Phono preamplifier:
Soulnote E-2

Loudspeakers:
DIY Focal / JBL
Wolf von Langa Zweiwege-Prototyp

Competitors

Power amplifier:
Yamaha P2200

The most necessary connections are available

Paul Kuhn – Live At Birdland

What we played

Paul Kuhn
Live At Birdland

Paul Desmond / Jim Hall
Easy Living

Jim Hall / Ron Carter
Alone Together

Cherry, Walcott, Vasconcelos
Codona II

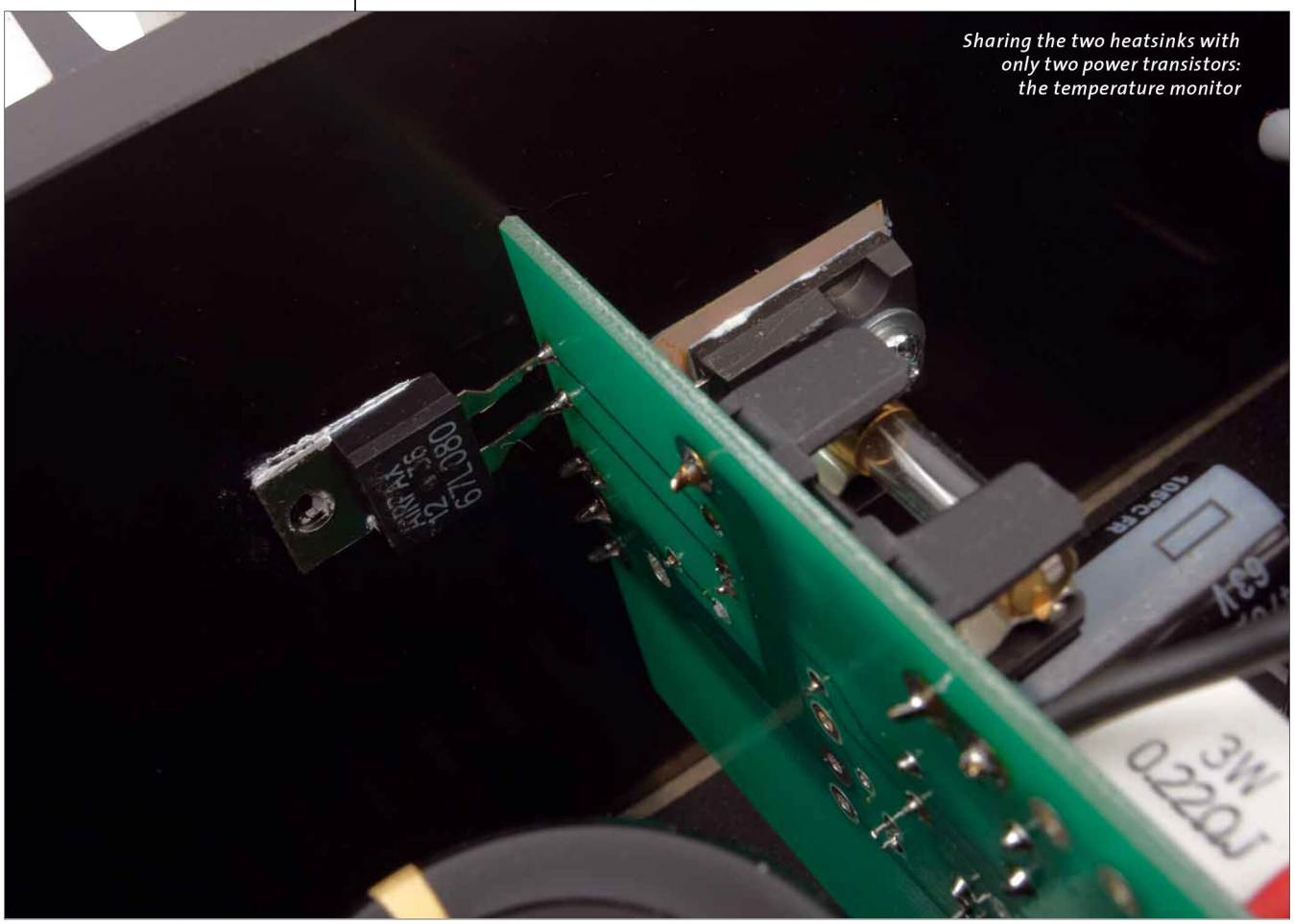
additional circuitry on the centered PCB is as scarce as possible. Thus there is no actual loudspeaker protection circuit. A micro fuse cuts the connection to the power supply in case of overcurrent, and a thermal switch also shuts down the power supply if the heatsinks get too hot. In practice, this has proven to be completely uncritical. The amplifier is perfectly stable even when measured at its power limits. The advantage in this context: There are no potentially degenerating relay contacts in the signal path. However, an electrolytic capacitor decouples the system-related DC voltage directly before the speaker terminals.

However, even that one is entirely harmless in practice, various renowned amplifiers have done the same over the years. The Monos like higher load impedances better than low ones – this is at least partly due to that capacitor.

In operation

The reduced conception of the amplifier in the best tube manner is not without consequences, of course: With an output of 40 watts into eight and 30 watts into four ohms, the units optimally serve a different kind of loudspeaker than, for example, the Accuphase E-5000, which recommends itself as an optimal partner even for demanding loads. The Ruppert Monos feel most comfortable on loudspeakers with an efficiency of at least 90 decibels. Regarding impedance, rather inconspicuous behavior is a good idea, too. Fortunately, I have something like that on offer and was very curious to see how the amplifiers would perform.

I confess that I was waiting for a „pop“ of the more substantial variety from the speakers when I turned on the power. The lack of a switch-on delay in conjunction with



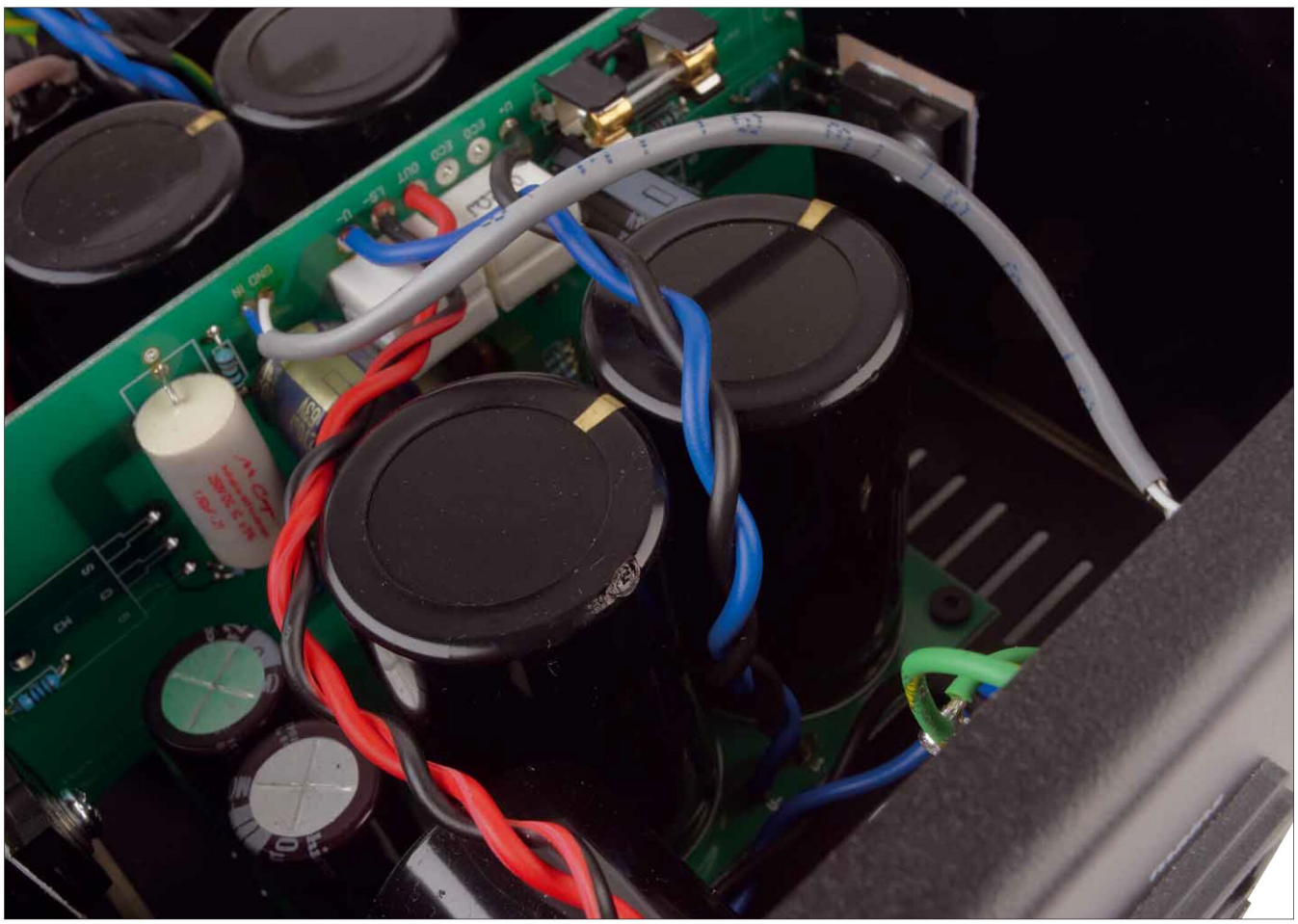
Sharing the two heatsinks with only two power transistors: the temperature monitor

the capacitor-coupled output called for something like that, but nothing happened: The Monos are tame even at just under 96 decibels of speaker efficiency. The same is true when switching off. Compliments to the designer, I would not have expected that. The tubes in my NEM preamplifier loll about more audibly when warming up to the day's form, which is also somehow part of the ritual at this point.

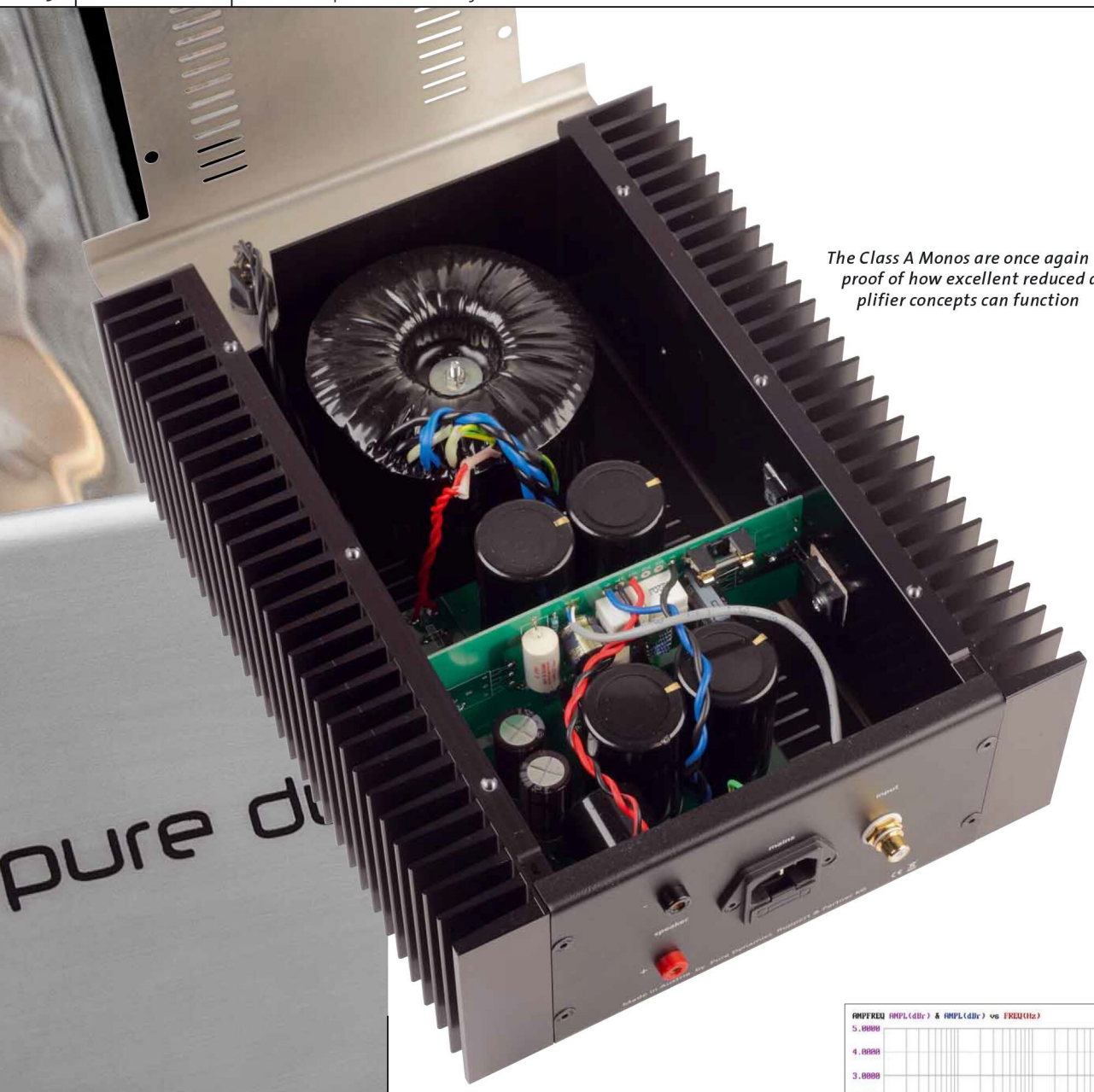
Sound

Of course, it's not a good idea to go after such amplifiers with „golden ears" immediately after switching them on. I have hardly ever experienced how much sound can change in a quarter of an hour as I did with these amplifiers. Right off the bat, the Monos prove to be agile, stable, and tonally perfectly correct, and I am sure many listeners would already be happy with the result.

Thanks to Paul Kuhn and a white pressing of the great „Live at Birdland" concert I recently received, I now know how big the difference between superficial correctness and actual top performance can be. When you can hear how the cymbal work integrates more and more perfectly into the musical action, how the entire body of sound slowly begins to pulsate and breathe, how the understanding between the musicians becomes more and more ingrained, that's when hi-fi takes a back seat and swing at its finest comes to the fore. When everything percussive develops color and finesse, when Paul Kuhn's little improvisations on the piano put a smile on the listener's face, things are running smoothly. And believe me: here he does. Then Paul Desmond's alto sax on „Easy-Living" is incredibly delicate, soulful, and smooth – it sounds so beautiful that you can't help but be moved to your knees. Jim



Four large filter capacitors complicate the view on the already sparsely equipped amplifier board



The Class A Monos are once again proof of how excellent reduced amplifier concepts can function

Hall's string attacks just bubble along, and the accompanying team has „grooved in." This is one of those situations I can well do without tapping the rock music suitability of a component - I am very sure this is also possible with these fantastic amplifiers. I much prefer to stay with Jim Hall for a while and enjoy his collaboration with Ron Carter, conveying an even more subtle but at least as exciting atmosphere. Great how skillfully the Monos trace Carter's bass lines and how tangibly the live atmosphere in New York's Playboy Club is transported here. It doesn't get much better than this!

Holger Barske

Measurements

Lab commentary

The Class A monos behaved perfectly in the lab. The frequency response report certifies perfect linearity up to almost 150 kilohertz. At one watt into eight ohms, the signal-to-noise ratio is 82.5 decibels(A), and the distortion of 0.14 percent is within acceptable limits. At eight ohms, 40 watts at 0.7 percent distortion are achievable; at four ohms, 30 watts. The power consumption per channel is a constant 132 watts.

Pure Dynamics Class-A-Monos

· Price per pair	6,750 Euro
· Distribution	Pure Dynamics, Wildon, Austria
· Phone	+43 6505336811
· Internet	puredynamics.com
· Warranty	2 years
· Dimensions (W x H x D)	230 x 105 x 315 mm
· Weight	approx. 8,25 kg
· Versions	Schwarz / Edelstahl

lp

Pure Dynamics
Class-A-Monos

International 1/23

» Pure Dynamics shows with its extremely reduced power amplifier concept that you can get sensationally close to the music with very few components. If the speaker fits – first choice!

Little Loudspeaker, plenty of Music

With Lyric Audio, a young manufacturer from Spain enters the international stage. Its specialty? Affordable full-range loudspeakers.

Considering the moderate overall price, the Lyric Audio box is well-executed

Background

Over the years, I have had the privilege of following quite a few „hi-fi careers." Among them were some that followed a definite pattern, which looks something like this: The listener continues to develop their demands, and with increasing age, the financial possibilities usually increase as well. The hi-fi system often becomes more complex and elaborate in the process. It is not uncommon for the user to spend a lot of time in front of a four- or five-way horn system: controlled fully actively via DSP crossovers and optimized to perfection with room correction software at the listening position. This is enjoyable for quite a while, tinkering and modifying at all ends and seemingly arriving at the sonic pinnacle. But - appearances are deceptive. A strange frustration spreads. The step after such a monster setup is often enough an unfiltered full-range speaker driven by a small tube amp.

The exotic metal buzz cone of the full-range driver is particularly eye-catching

The bass reflex system has a large-volume outlet on the front side

Teammates

Turntable:
TechDAS Air Force III / Reed 3p / Reed 1x

Cartridges:
DS Audio DS 003
Audio Technica AT-5V

Phono preamplifier:
DIY-Röhrenentzerrer

Integrated amplifier:
Thivan Labs 811 Anniversary
Cayin HA-300 MK II

Preamplifier:
NEM PAS-5

Power amplifier:
Pure Dynamics Class-A-Monos

Competitors

Loudspeaker:
DIY Focal / JBL

Maybe that's the way it has to be. Perhaps you must go through all the stages of such a „career" to appreciate a pure and straightforward playback solution.

Don't get me wrong: this path is not the right one for everyone. But it is for an astonishing number of people.

The Spanish manufacturer Lyric Audio makes speakers for such cases. And also for people who have always known it and for whom there is no alternative to a maximally reduced solution from the start. The beauty of Lyric speakers is that they make experimentation possible in this regard due to their relatively moderate pricing. In addition, there is the fact that they do not look weird or old-fashioned at all but can be integrated into a modern living ambiance without any problems.

Moonriver 6

Our review sample is the smallest floor-standing speaker in the Lyric range at a pair price of 2600 Euros. It is a stylish design just under a meter tall, in which, naturally, only one driver is used. In the present case, it has a diameter of 6.5 inches. The 93 decibels of efficiency promised by the manufacturer are optimistic because the speaker only achieves such efficiency starting from the midrange, below which there's noticeably less sound pressure.

The motor of the full-range driver probably consists of neodymium magnets

Kungens Män – Bränna Tid

What we played

Kungens Män
Bränna Tid

Adele
30

Terje Rypdal
Waves

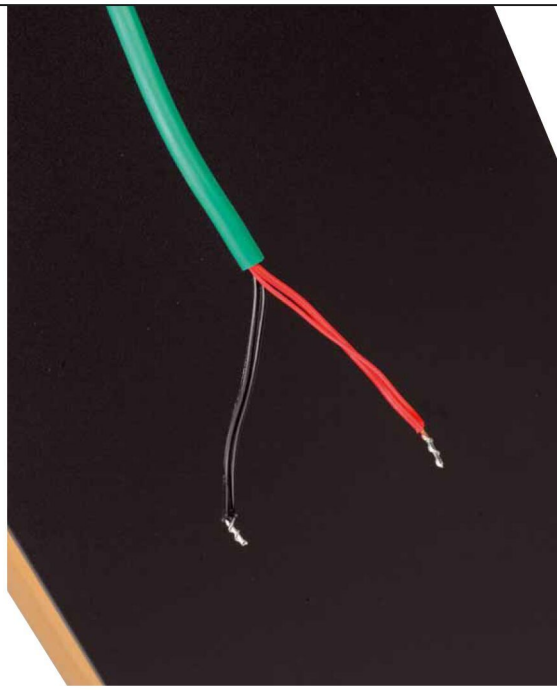
Ryan Adams
Heartbreaker

However, this qualifies the transducer for use under actual living room conditions, i.e., not in the middle of the room but with little distance from the rear wall. The individual case must show how close, but 20 centimeters are feasible. There is no need to fear excessive excitation of the lowest registers, especially since the voluminous vent exits at the bottom of the baffle.

Cabinet

The cabinet is a high-quality MDF construction. Only the oak-natural wood veneer is available as a surface, and the attached front is matte black. Its front edges are beveled at the bottom in the area of the vent, which is undoubtedly suitable for the appearance.

The cabinet has even been properly worked with a counter-drawn veneer inside, which I find very appealing for this price range. Threaded sleeves are embedded in the bottom of the speakers, into which the supplied metal feet with felt gliders (can) be screwed. This solution is neither fish (decoupling) nor fowl (coupling), but it does the trick for now. You can operate the converter without the feet if you don't want to spend money at the accessory dealer.



Even the speaker cable inside the box is of high-quality

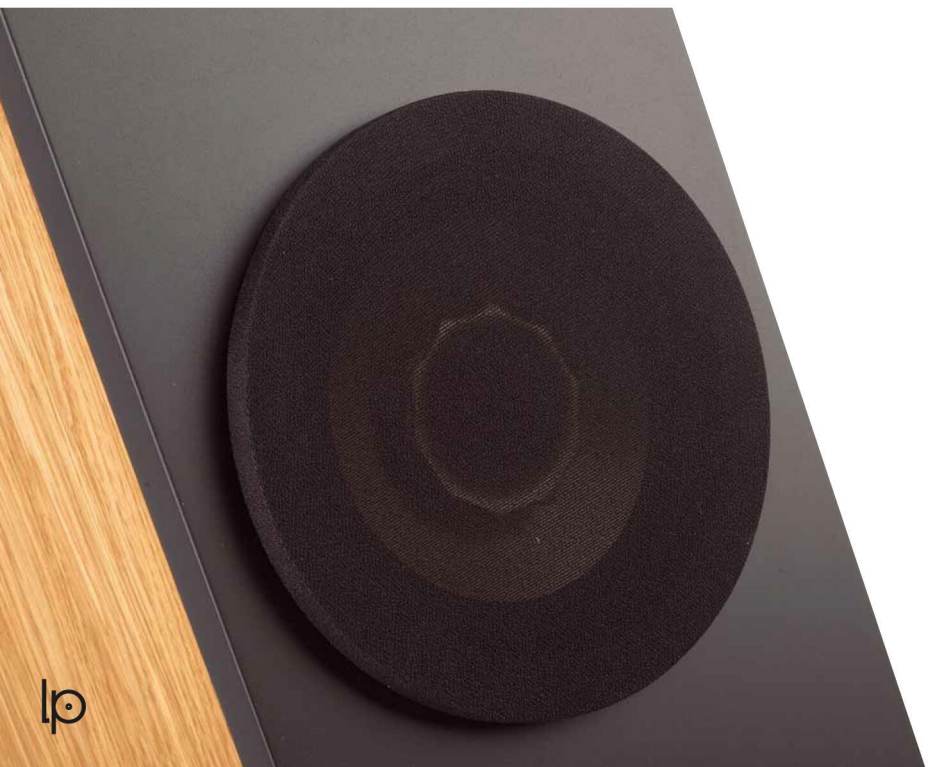
The driver

The heart of the Moonriver 6 is a full-range driver from the Chinese supplier Lii Audio. Lii Audio has meanwhile made a name for itself with a whole series of full-range transducers. For this speaker, Lyric has selected the top model of the 6.5-inch series, „Lii Song Crystal-6". And since you'll be googling for it anyway: You can also buy the drivers directly in China as a (hopefully) selected pair for $500 plus shipping and import sales tax.

The transducer's construction is intriguing: A gold-colored metal cone is used as the diaphragm, although I suspected it could also be a metalized plastic diaphragm when I „felt" it. It is guided by a generously dimensioned soft surround, whose material, I would guess, is foam. The bonding with the cone is perfectly clean.

The driver's most striking feature is the „ten-cornered" buzz cone. The exotic calyx is attached to the inside of the cone neck and is supposed to help the high-frequency reproduction. This part is definitely made of thin sheet metal. Inside the pole core sits an acrylic phase plug that is supposed to improve dispersion at high frequencies.

Magnetically held covers for the driver are included



The whole thing hangs in an elaborate cast frame made of two bolted parts. The manufacturer does not mention the magnet, but I would assume that neodymium is used. The parameters given by the manufacturer seem pretty realistic. A resonance frequency of a good 56 Hertz fits, the overall Q is in the good bass-reflex range, and the moderate equivalent volume fits it. The well-made construction seems to be in good hands in the enclosure used here.

Crossover

There is no filtering of any kind in the Moonriver 6. No equalization, no compensation, nothing. The driver is connected directly to the terminals. This does not make the job any easier, but on the other hand, it is considered the holy grail when operating full-range speakers.

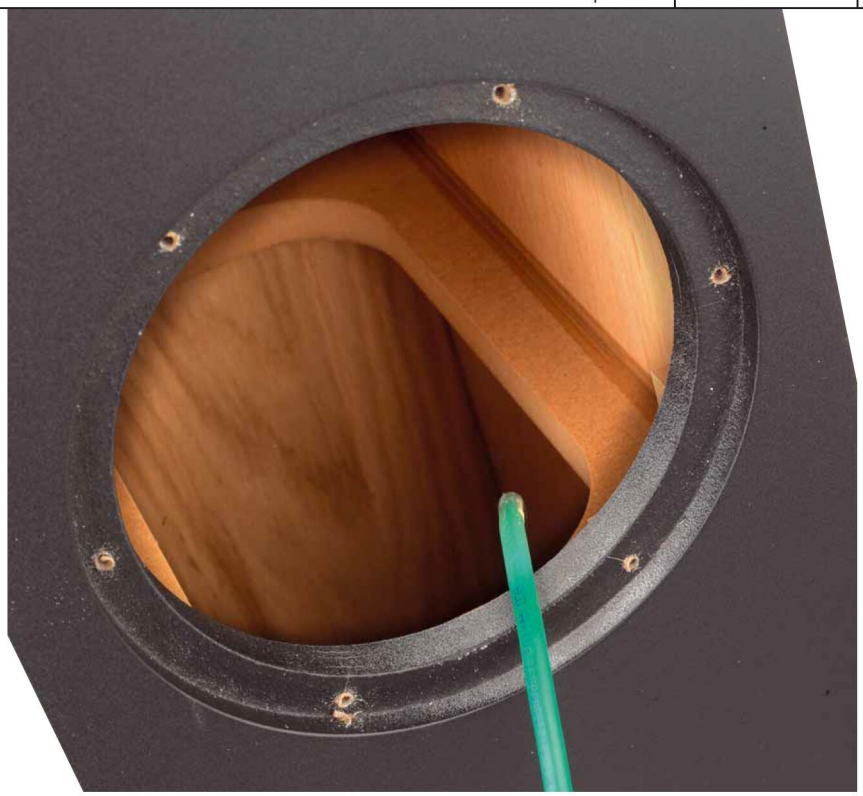
Details

The cabinet, which requires almost no additional struts or stabilizers, is sparingly insulated, which fits the concept: Not much sound should „hang out“ here. A striking feature is the use of apparently high-quality internal cabling. As usual with full-range speakers, you should give the Moonriver 6 a decent break-in period; they underperform right out of the box.

Sound

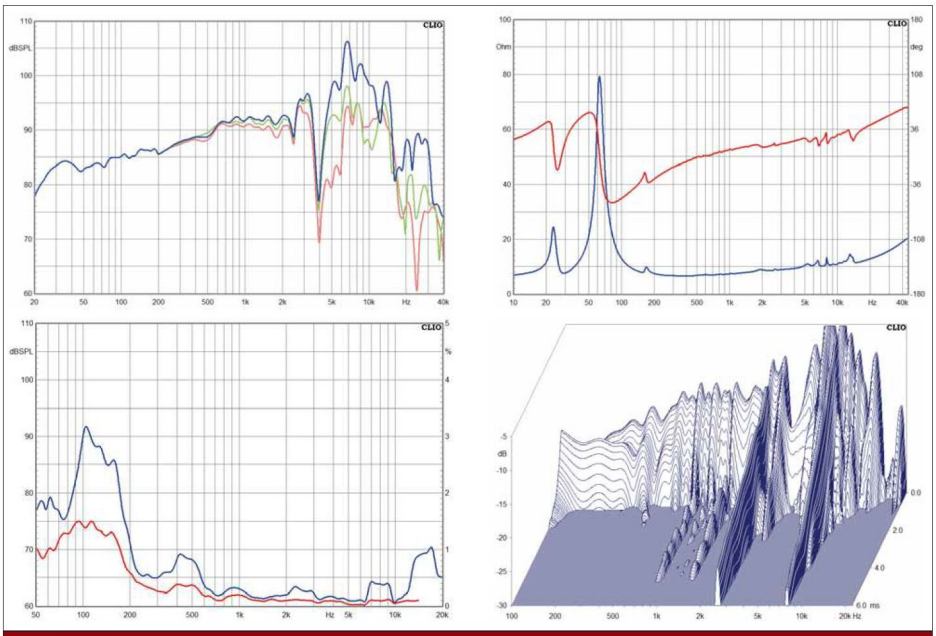
I quickly abandoned the attempt to operate the speakers free-standing in the room; there is simply too little bass. With a distance of 20 to 30 centimeters to the rear wall, it works, but it doesn‘t make the Moonriver 6 a bass monster, but it lets the Swedish improvisational rockers Kungens Män rock credibly. You have to be a bit careful with the placement. With the full-range drivers aimed directly at the ear, the upper midrange is too loud. It helps to turn the speakers a bit outwards – how far depends on their distance from each other.

Brass always sounds good on such transducers, so it‘s better not to use only John Coltrane records for the setup. It works much better with a voice, for example, Adele‘s. Once you have achieved a correct



Even with a counter veneer on the inside: the quality of the cabinet is remarkable

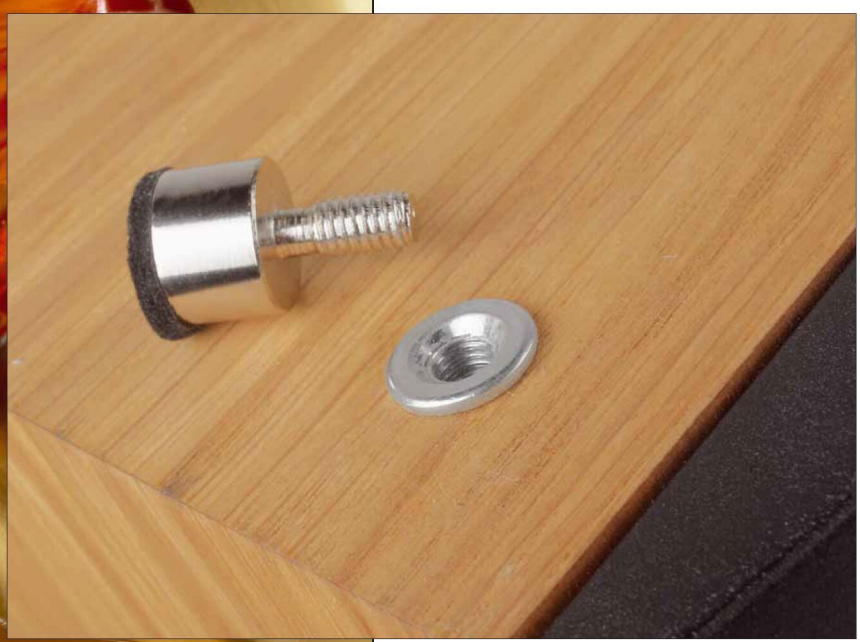
The full-range driver has a very solid screwed frame



Measurements

Lab commentary

The Lyric's frequency response chart reveals that it is designed for operation in front of a wall. Free in the room, it drops noticeably below 500 Hertz. The full-range driver's diaphragm shows noticeable deviations in the mid- and treble range, but the narrow-band drop at four kilohertz isn't too bad. With the right angle, something like linearity can be achieved, and the frequency response extends slightly above 15 kilohertz. Efficiency is realistically around 90 decibels at 2.83 volts, which is quite good. The impedance measurement chart reveals eight-ohm behavior. The position and expression of the two impedance peaks in the bass show a very low cabinet tuning, which explains the early level drop. The distortion at 85 decibels of sound pressure is okay, and the waterfall diagram shows two excursions at just under three and eight kilohertz, typical for such a design.



The feet are debatable, but at least they are supplied

tonality with this undoubtedly impressive organ, you are almost there. The trick to running this transducer, however, is a suitable amplifier. And rarely have the clichés been so true as with these speakers: it has to be a small tube. The Cayin HA-300 MK II headphone amplifier from the last issue proved to hit the bull's eye once again. The Moonriver 6 love the 300B. The harshness in the playback disappears; everything flows, and it sounds incredibly smooth. The Swedes mentioned above have grooved in perfectly, sounding spacious and loose. This is also an excellent match for Terje Rypdal's 1978 album „Waves," which recording legend Jan Erik Kongshaug masterfully captured with warmth and detail. Over the Lyric box, it sounds atmospherically dense, delicate, and inviting. Very good!

Holger Barske

Lyric Audio Moonriver 6

· Price per pair	2,600 Euro
· Distribution	TCG GmbH, Nordhorn
· Phone	+49 5921 7884927
· Internet	tcg-gmbh.de
· Warranty	2 years
· Dimensions (W x H x D)	220 x 980 x 360 mm (incl. outriggers)
· Weight	approx. 20 kg

Lyric Audio Moonriver 6

International 1/23

» Provided that the setup is done with care and that the speaker is driven properly, this speaker charms with very subtle and extremely atmospheric reproduction, great spatial representation, and a lot of realism. A very nice solution for intensive music listening, although level orgies are not its thing.

INPUT
BAL CD
BAL
LINE 1
LINE 2
LINE 3
POWER

The Power and the Glory

The development of the integrated amplifier itself could have been declared finished with the appearance of the Accuphase E-800. From there, an improvement is hardly conceivable. But perhaps a solution that is still a bit more suitable for exceptional cases?

The E-5000 is the most powerful integrated amplifier ever built by Accuphase

The remote control can, of course, also operate one of the in-house digital players

Hierarchies

You can sigh in relief: The E-800 (currently EUR 15,500) remains the largest integrated amplifier Accuphase has ever built. And with its uniquely smooth and intense performance, it stands like no other as a symbol of how far you can go if you know how to gauge Class A operation as finely as the engineers from Yokohama.

Even though the E-800 is not in danger of capitulating to almost any loudspeaker load, Accuphase pursues a two-pronged strategy for both power amplifiers and integrated amplifiers. There are transducers out there that can be handled better with a little less quiescent current and more output power. And to put the anniversary Class A model E-800 alongside an adequate device from the Class A/B camp, also under the 50th-anniversary banner, there's now the E-5000 for 13,900 EUR.

Class differences

And it's a stunner, I can promise you that much already. It is the most powerful integrated amplifier the Japanese company has ever put on the keel. As always, the power specifications are discreetly restrained, but our measurement technology speaks a clear language: 250 watts of continuous power into eight and 400 watts into four ohms – that's quite a statement for an integrated amplifier. This has consequences for the physique of the device: With an overall height of 211 millimeters, the E-5000 towers over AB's previous top model, the E-480, by 30 millimeters in height and only has to subordinate itself to the E-800 in this respect – by 28 millimeters. And yes, I am pretty sure that this gradation, visible from afar, is not only due to technical circumstances but intentional.

In the product brochure, I sorely miss the block diagram that is otherwise obligatory for Accuphase. No other manufacturer in the past has dared to drop their pants in technical terms as far as the Japanese. Nevertheless, there is no lack of detailed information: The power amp section is reportedly based on the mighty P-7300

stereo power amp, which interestingly has nominally less output power at „normal“ speaker impedances and is only supposed to have advantages at unrealistically low impedance loads.

Operation

In terms of operation and features, the new model naturally follows the Accuphase tradition that has proven itself over many years. As always, it is nuances in which newly developed devices differ from their predecessors, and the E-5000 makes no difference. Such little things as the now shiny gold-colored „collars“ around volume controls and input selector switches add a touch more luxury. Or the brand-new pointer instruments, which now make the level control in the lower level range even more readable than in the past. An interesting detail in this context: If I set the device‘s output power to precisely one watt at an eight-ohm resistor (our Audio Precision analyzer is incorruptible in this respect), then both instruments of the E-5000 display one watt. And exactly. This is not important in practice, but it grants that immensely reassuring feeling of precision down to the last detail you only find with Accuphase. Large Accuphase integrated amplifiers are traditionally best suited to manage even extensive equipment configurations. In the case of the E-5000, that means nine source devices, two symmetrical, plus a recording device can be connected. Of course, there are connections for the preamp output and the power amp input. Balanced as well as unbalanced - that‘s obvious.

And, of course, everything that could disrupt the wonderfully tidy front is under the gently opening cover: tone controls, speaker selector, every conceivable operating mode selection, and the parameterization for the optional input modules: the AD-50 phono module, the DAC-60 D/A converter, and the AD-10 line module are currently available. And, of course, there‘s a remote control that fits perfectly in hand, with which a large part of what‘s offered can be controlled from the armchair. All this is, of course, on the same level as the E-800.

Teammates

Turntable:
Clearaudio Reference Jubilee

Tonearm:
Clearaudio TT3

Cartridge:
Clearaudio Jubilee MC

Phono preamplifier:
Clearaudio Balance Reference

Loudspeakers:
Dynaudio Consequence MK II
Wolf von Langa Prototyp

Competitors

Integrated amplifiers:
Thivan Labs 811 Anniversary
Cambridge Audio Edge A

Nine inputs, plenty of outputs, symmetrical and unbalanced connections – everything your heart desires

LA4 – Just Friends

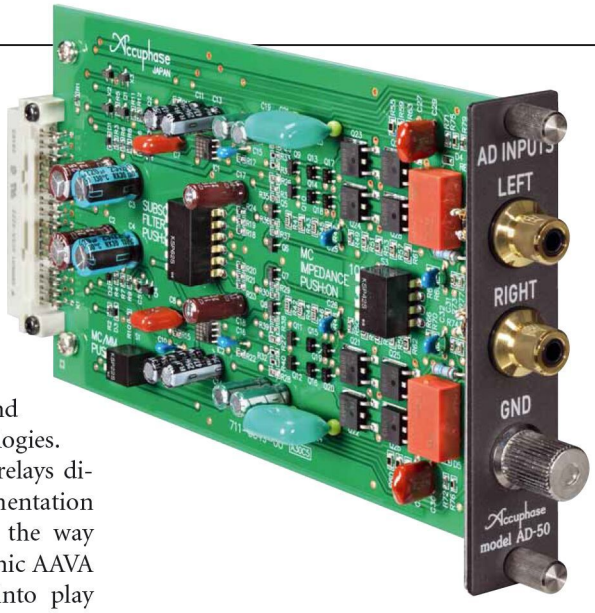
What we played

LA4
Just Friends

Tool
Fear Innoculum

Nightmares On Wax
In A Space Outta Sound

The Montgomery Brothers
Groove Yard



The proven AD-50 phono module also fits into the E-5000 of course

Engineering

There are also parallels between the two devices in technical terms: Both are fully balanced and rely on very similar circuit topologies. After the input switching (with relays directly on site), a discrete instrumentation amplifier arrangement prepares the way for the uniquely complex electronic AAVA volume control, which comes into play here twice. That's why it also generates symmetrical output signals, routed to the (naturally bypassable) tone control stage, a buffer amplifier, and finally to the power amplifier. The latter is, as usual, completely channel-separated. Each of the modules, which form a compact unit with its heatsink, is equipped with ten bipolar output stage transistors, which have no problem providing the required power floods. A noiselessly damped toroidal transformer provides the required energy, and two impressive 40000 microfarad electrolytic capacitors filter and smooth the operating voltages.

The two module slots have a tradition with Accuphase integrated amplifiers

The power amplifier module is related to that of the power amplifier P-7300

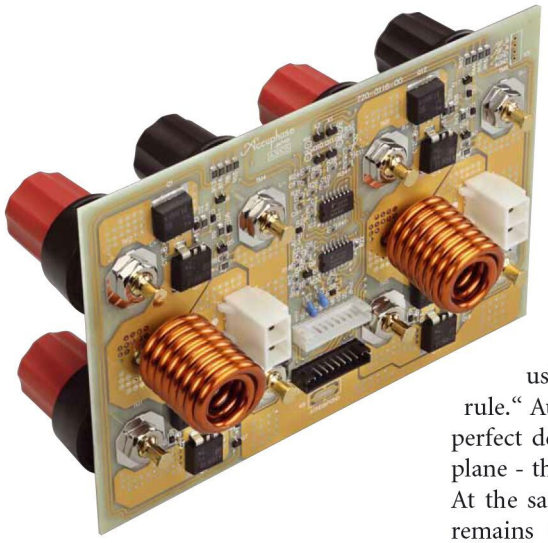
The volume control is located behind the front and is well-protected from all possible noise sources. Behind the volume knob, the probably most complex rotary encoder the hi-fi world has ever seen is at work. However, its „rotary feel" is also unique.

Accuphase engineers traditionally emphasize maximum damping factor in their power amplifiers. To achieve this, they have come up with several ideas. Even in the E-5000, relays no longer work in the protection circuit. The output signal has been switched with tiny SMD MosFets for some time. In the latest version, their internal resistance is a mere 1.9 milliohms. So, there was no great revolution in circuit design, but that was not necessary. Instead, the sum of many small improvements should help the E-5000 to the top position in its category.

Despite generous dimensions, the entire space inside the unit is used

Sound

If there's one loudspeaker that requires an amplifier with such performance specs, it's the venerable Dynaudio Consequence from the early eighties. The passive five-way design with two twelve-inch basses in a compound arrangement was considered just about the most power-hungry thing on the market then. As it happens, we had a pair of these challenging speakers at our disposal, and of course, the E-5000 had to show whether it could adequately power the Danes. The result was nothing less than a shock. After everything I had found for comparison in the house failed to produce much more than cultivated boredom with the Dynaudios, the E-5000 provided a high-dose injection of adrenaline. I would never have guessed how tremendously powerful and energetic this woofer arrangement could get down to business. What the double bass legend Ray Brown and his friends from LA4 manage to create is astonishing. Rumbling, powerful, and stable, but still fluid and finely chiseled. I have not heard this performance more convincing.



The loudspeaker connection panel with the high-potential MosFet load switches

Staging is the second striking feature that the E-5000 is capable of creating. To the extent that it imposes itself, even without using the meticulous „inner folding rule.“ Authority in all room dimensions, perfect detachment from the loudspeaker plane - the big Accuphase does that easily. At the same time, the soundscape always remains tonally precise, sovereign, and straightforward. Firmly convinced that the whole thing would tip over on transducers efficiently, I hooked up a pair of two-way field coil speakers with 15-inch Wolf von Langa woofers. Tilt? No way. I‘ve yet to get this much energy, punch, and plump liveliness out of the 96-decibel speaker with anything else. For the horn tweeter, which is not blessed with too much treble SPL, the energetic E-5000 was precisely the proper remedy, as I now know.

Measurements

Lab commentary

Perfection as usual: The E-5000 amplifies precisely the same in both channels, up to over 100 kilohertz. At eight ohms, it produces a clean 250 watts, and at four ohms, 400. At five watts at the output (eight ohms), it achieves almost 100 decibels(A) signal-to-noise ratio, and the channel separation is slightly lower. The values for the four-ohm operation are practically identical. At one watt, the distortion factor at eight and four ohms is an excellent 0.016 percent. The idle power consumption is 87 watts.

It‘s good to know that the E-5000 now provides a tool for those for whom the math doesn‘t add up ideally with the uniquely smooth and open E-800.

Holger Barske

A familiar face, and yet there are again various improvements in detail in the operating concept

Accuphase E-5000

· Price	13,900 Euro
· Distribution	PIA HiFi. Weiterstadt
· Phone	+49 6150 50025
· Internet	www.pia-hifi.de
· Warranty	2 years
· Dimensions (W x H x D)	465 x 211 x 502 mm
· Weight	approx. 34 kg

lp

Accuphase
E-5000

International 1/23

» The E-5000 is the new benchmark in sovereignty and straightforwardness. Combined with its ability to span wide spaces, it is undoubtedly one of the best amplifiers on the market.

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Michael E. Brieden Verlag GmbH
The Test-Specialists
Duisburg · Germany

Coming soon:

Luphonic H2

Luphonic is a new manufacturer from Germany. We're taking a look at the turntable H2, equipped with the tonearm K2. Both are completely made in Germany, some very interesting technical details have been implemented.

Line Magnetic LP-33

This is a very nice tube phono stage with lots of references to the old days. It can handle MM and MC cartridges, and we are eager to find out how it sounds.

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